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GENERAL STUDIES (TEST CODE : 1984)

Name of Candidate	ANAND MALHOTRA		
Medium Eng./Hindi	ENGLISH	Registration Number	1018150
Center		Date	24/11/2021

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

EVALUATION INDICATORS

1. Conceptual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure / Presentation Competence
6. Conclusion Competence

Overall Means Comments / feedback / suggestions on Answer Booklet

1.

2.

3.

4.

5.

6.

All the Best.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. To safeguard and uphold the freedom of speech and expression in India, it is imperative to adequately reform colonial laws that curtail free speech. Discuss. (150 words) 10

भारत में वाक् एवं अभिव्यक्ति की स्वतंत्रता को सुरक्षित रखने और उसे बनाए रखने के लिए, मुक्त वाक् को कम करने वाले औपनिवेशिक कानूनों में पर्याप्त रूप से सुधार करना अनिवार्य है। चर्चा कीजिए।

"where the mind is without fear and the head is held high" - Rabindranath Tagore

The Preamble and Fundamental Rights of our constitution seek to secure freedom of speech and expression for its citizens.

However, many colonial laws curtail free speech :⇒

① IPC section 124 :⇒ Also called sedition law → empowers state to arrest anyone who cause disaffection

→ gandhiji called this prince among colonial laws aimed at thwarting free speech

② Preventive Detention laws → Laws like UAPA continue unabated in a modern democracy like India.

margin (कुछ भाग में कुछ ना लिखें)

→ Empower arrest under preventive detention and detainee does not enjoy rights under A. 22 of Constitution

③ Official Secrets Act, 1923 :⇒

Curbs disclosure under RTI → a key component of exercise of free speech as per SC judgements.

Freedom of speech can be ensured by guarding against such colonial tendencies by :⇒

① Effective review and repeal of OSA ~~and~~ as per Law Commission Report

② Use of Preventive detention only in cases of intent to cause violence and not on grounds of dissent and govt. criticism as per SC judgement.

③ Comprehensive review of colonial pronouncements which curb free speech.

As we celebrate Azadi Ka Amrit Mahotsav @ 75 years of Independence, it is time we move beyond our colonial mindset of control and restrain in free speech and expression.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. What do you understand by the 'doctrine of neutrality'? Explain its significance for constitutional offices in the Indian context. (150 words) 10
'तटस्थता के सिद्धांत' से आप क्या समझते हैं? भारतीय संदर्भ में संवैधानिक पदों के लिए इसका महत्व स्पष्ट कीजिए।

Doctrine of neutrality implies that the holder of a public office should behave with an attitude of formalistic impartiality and without malice to anyone. eg.:⇒ A judge should remain oblivious to his kinship ties in pronouncing a judgement.

Key tenants of doctrine of neutrality

1. Impartiality → no favouritism
2. Transparency → data led decision making
3. Intellectual honesty
4. No pre-conceived notions
5. Accountability → To the general public
6. Rule based governance → No arbitrary decision-making

margin

Significance for Constitutional Offices

1. Separation of power is ensured
2. Checks centralization / dictatorial tendencies
3. Boosts public confidence in institutions
4. Checks discontent and anarchy
5. Preserves system of checks & balances
6. Promotes ease of doing business and consequent material well-being.
7. Ensures independent judiciary and just judicial system

Thus, doctrine of neutrality holds special significance for constitutional offices and promotes both material and non-material well-being of nation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. Highlight the role of pressure groups in a democratic country. Also, differentiate between pressure groups in India and developed countries. (150 words) 10

एक लोकतांत्रिक देश में दबाव समूहों की भूमिका पर प्रकाश डालिए। साथ ही, भारत और विकसित देशों में दबाव समूहों के मध्य अंतर स्पष्ट कीजिए।

PRESSURE GROUPS are interest groups which influence government to make favourable policy decisions without seeking public office.

Pressure groups
- → Primordial (Caste groups)
- → Institutional (Lok Sunny)
- → Promotional (FICCI)
- → Preventive (PETA)

ROLE OF PRESSURE GROUPS

1. Watchdog → Passage of RTI, Lokpal Bill
2. Service Provider → Hemkund Foundation
3. Educator → PETA
4. Agitator → India Against Corruption
5. Mobilizer → BKU, Trade Unions

Don't write anything in margin

difference between Pressure Group in India and other countries :⇒

① Indian Pressure groups (PGs) operate chiefly through mobilization of people while western PGs sponsor political action through PACs and Super PAC fundings. eg :⇒ Koch brothers in US

② The corporate lobbies / PGs operate covertly in India and overtly abroad. eg ⇒ National Rifles Association (NRA)

③ The rhetoric of Indian political environment is reflected in left of farmer and trade groups while it is dominated by corporate lobbyists and weapon makers in the west

Pressure groups are an important spoke in the wheel of any modern democracy and when conducive can facilitate our transition to a 5 trillion USD economy.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Highlighting the factors that have led to increased instances of delegated legislation and administrative adjudication, discuss the issues associated with these. (150 words) 10

प्रत्यायोजित विधान और प्रशासनिक न्यायनिर्णयन के बढ़ते दृष्टांतों के लिए उत्तरदायी कारकों को रेखांकित करते हुए, इनसे संबद्ध मुद्दों की विवेचना कीजिए।

Delegated legislation means do the executive government assuming vast legislative powers through a wide legislation and framing rules which endow it with wide powers.

Administrative adjudication means to administrators doing judicial pronouncements through their powers.

Both delegated legislation and administrative adjudication impinge upon the roles of legislature and judiciary as seen from

1. Broad legislation giving executive power to frame wide ranging rules
2. Lack of debate and committee examination of bills in Parliament
3. Administrative overreach in interpreting rules
4. Increasing trend of tribunalization of justice.

ISSUES

1. Erodes system of checks & balances
2. Protests against unpopular bills like Farm Acts
3. Govt. gets pressurized into not framing rules for want of retaliation → labour laws
4. Govt gains wide ranging judicial powers → undermines separation of power.

WAY AHEAD

Indian polity is premised on separation of powers enunciated under A.50 which seeks to check what Montesquieu called as despotic rule.

Therefore, a responsible and consensus led environment will be conducive for good governance.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. Highlight the significance of Gram Nyayalayas in providing inexpensive and speedy justice to people in rural areas. Also mention the issues being faced by them. (150 words) 10

ग्रामीण क्षेत्रों में लोगों को सस्ता और त्वरित न्याय प्रदान करने में ग्राम न्यायालयों के महत्व पर प्रकाश डालिए। साथ ही, उनके द्वारा सामना की जा रही समस्याओं का भी उल्लेख कीजिए।

Gram Nyayalayas were set up under the Gram Nyayalaya Act, 2008 to (GN) serve as alternate dispute resolution means to the rural at the block or contiguous Panchayat level.

IMPORTANCE

1. Inexpensive and speedy justice
2. Only summary procedure → easier to comprehend.
3. Not bound by Indian Evidence Act and CPC.
4. Its decision has force of law and can be appealed in district courts
5. Can try both civil and criminal cases

Don't write anything this margin (इस भाग में कुछ ना लिखें)

ISSUES

1. Lack of enthusiasm among judiciary, lawyers and admin as most blocks have courts

2. Not functioning/operational at scale due to wide vacancies in judiciary

3. Non-devolution of adequate funds

4. Lack of awareness among the masses

WAY AHEAD

The burgeoning burden of pending cases poses a great challenge to our judicial system and Gram Nyayalayas offer a great means to expedite justice and fulfill Gandhiji's dream of Gram Swaraj.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

6. Enumerating the key objectives of the Foreign Contribution Regulation Act, discuss why the recent amendments in the act are seen as a matter of great concern for the development sector in India. (150 words) 10

विदेशी अभिदाय (विनियमन) अधिनियम के प्रमुख उद्देश्यों को सूचीबद्ध करते हुए, चर्चा कीजिए कि इस अधिनियम में हाल के संशोधनों को भारत में विकास क्षेत्रक के लिए बड़ी चिंता का विषय क्यों माना जा रहा है।

Foreign Contributions Regulation Act (FCRA) seeks to regulate flow of foreign exchange flowing into non-govt. organizations and other entities.

RECENT AMENDMENTS

1. Opening of a dedicated account in SBI branch in New Delhi
2. Restrictions on civil servants and others to receive funds under these accounts
3. Pronouncements directing / limiting amount of appropriations to be done as admin expenses.
4. Limitation of transferring funds to other organizations from these accounts
5. Frequent reporting and license renewal for operation.

Due to these reasons, provisions the act is been seen detrimental towards NGOs which bank upon donations.

Key Objectives behind Act

1. Checking money laundering
2. Check on undue foreign influence
3. Fostering accountability as only 10% of 29 lakh+ NGOs file returns (CBI report)
4. Bringing in transparency in admin. of NGOs
5. Check threat from terrorism (black money)

Way Ahead

The COVID-19 crisis has shown importance of NGO sector in delivery of last mile services. The regulation of foreign funds should balance the need for national sovereignity with public welfare.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

7. Dispute resolution should be seen not as a court where justice is administered, but as a service which is availed of. Discuss the statement in the light of Online Dispute Resolution (ODR) in India. (150 words) 10

विवाद समाधान को न्यायालय के रूप में नहीं देखा जाना चाहिए जहां न्याय का प्रबंध किया जाता है, बल्कि एक सेवा के रूप में देखा जाना चाहिए जिसका लाभ उठाया जाता है। भारत में ऑनलाइन विवाद समाधान (ODR) के आलोक में इस कथन की विवेचना कीजिए।

Online dispute resolution (ODR) has seen wide traction much on account of the COVID-19 pandemic.

Forms of online Dispute resolution
- → e-courts
- → Online mediation
- → Connected Arbitration
- → Grievance Redressal through e-ticketing in consumer courts

Traditional ~~role of~~ experience in a court of justice

1. Physical meaning in an alienating environment filled with robe adorned and law speaking advocates
2. Intractable legal jargon and precidents → for a commoner
3. Multiple hearings and long winding delay tactics by lawyers during a trial.

Transformation by online dispute resolution

1. Saves precious time and energy in commute and court visit

2. Extremely efficient if supported by responsive technological stack

3. Use of AI in determining order of cases for fast track justice delivery

4. Ability for wide sections of society to view and learn from court proceedings through live telecasts (Gujarat HC)

5. Ability to reach remotest areas for faster and responsible justice (social-distancing)

Thus, ODR is a harbinger of paradigm shift in our jurisprudence changing dispute resolution ~~courts~~ from places like courts where justice is administered ~~to one which deals~~ to a service which is availed of.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

8. Section 33(7) of The Representation of People Act (RPA), 1951 should be amended to restrict contestation on only one seat for every candidate. Discuss. (150 words) 10

प्रत्येक उम्मीदवार को केवल एक सीट से चुनाव लड़ने हेतु बाध्य करने के लिए लोक प्रतिनिधित्व अधिनियम (RPA), 1951 की धारा 33(7) को संशोधित किया जाना चाहिए। चर्चा कीजिए।

Section 33(7) of the RPA, 1951 allows for contestation from more than one seat in an election. If the candidate is successful in both seats, he needs to vacate one.

ISSUES

1. Unfair to the electorate of both constituencies
2. Wastage of precious public exchequer money in re-election, if any
3. Inconvenience to electorate in recasting ballot
4. Takes away local governance agenda as it is aimed at electing a leader only and nothing more
5. Double membership is not recognized and can be a ground for disqualification → increases administrative burden

anything in margin (कृपया इस में कुछ ना लिखें)

WAY AHEAD

1. Need to amend RPA → restriction to a single seat only.

2. Local governance agenda should be raised at constituency level

3. Political parties should set right example by not fielding a candidate from multiple seats

4. Civil society should pressurize political parties ~~governments~~ to nominate popular leaders and not indulge in seat-selling.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

9. The idea that Public Intent Data can play a transformative role in the public sector is not bereft of challenges. Discuss. (150 words) 10
यह विचार कि लोक प्रयोजन डेटा (पब्लिक इंटेंट डेटा) सार्वजनिक क्षेत्रक में एक परिवर्तनकारी भूमिका निभा सकता है, चुनौतियों से रहित नहीं है। चर्चा कीजिए।

Public Intent Data refers to gauging public opinion on wide ranging issues to make informed decisions.

TRANSFORMATIVE ROLE IN PUBLIC SECTOR

1. Promotes public participation
2. Informed & consensus led decision making
3. Decreases the role of money by lobbyists in influencing decision-making
4. Makes govt. more transparent and accountable to people.
5. Relatively conflict-free implementation of development projects.

Challenges

1. Too much democracy can be a sign of failure of governance

2. Can be source of conflict in society if opinion is divided

3. Logistically difficult to manage at scale

4. Can be misused against dissenting voices

5. Can be manipulated if hacked/rigged.

Thus, while Public Intent Data holds great promise of improving governance it needs to be harmonized with associated data and logistical challenges to be an effective tool of governance.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

10. Cabinet committees can play a crucial role in accelerating the government's decision-making and reforms. Critically evaluate. (150 words) 10
मंत्रिमंडल समितियां सरकार के निर्णय-निर्माण और सुधारों को त्वरित करने में महत्वपूर्ण भूमिका निभा सकती हैं। समालोचनात्मक मूल्यांकन कीजिए।

Cabinet committees refer to group comprised of PM and select Council of Ministers who collectively take key executive decisions. The 44th Amendment made the President bound by Cabinet advice.

~~NEE~~

ROLE PERFORMED

① All central govt. decisions are taken by cabinet committees

② They shape the government's agenda and are the top policy making institution.

③ They are focussed and organized along specialized functions like security, economic affairs, etc. which aids in specialized decision making.

④ They are crucial to the role of

collective responsibility as a 50+ member CoM came too unwieldy to decisively concur in time.

VIEWS AGAINST CABINET COMMITTEE

1. Against the principle of broad-based governance

2. Lead to centralization of power ~~but~~ in PM and his kitchen cabinet.

3. ~~They have~~ In recent times, under criticism for not being consulted and excessive centralization in the PMO.

The Cabinet does not find mention in the Constitution (explicit structure). However, Cabinet Committees have come to play an important role in transformation of the nation through quick decision-making and reforms.

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11. While the judiciary should not be a silent spectator when constitutional rights of citizens are infringed by executive policies, it must also not assume the role of the executive or pass policy prescriptions. Do you agree? Justify your stand with logical arguments. (250 words) 15

जब कार्यकारी नीतियों द्वारा नागरिकों के संवैधानिक अधिकारों का उल्लंघन हो तब न्यायपालिका को मूक दर्शक नहीं बने रहना चाहिए, साथ ही इसे कार्यपालिका की भूमिका भी ग्रहण नहीं करनी चाहिए अथवा नीतिगत निर्धारण जारी नहीं करना चाहिए। क्या आप सहमत हैं? उचित तर्कों के साथ अपने रुख का औचित्य सिद्ध कीजिए।

The judiciary enjoys wide powers of judicial review, scrutiny and oversight under Articles 13, 32, 226 and 142 of the Indian Constitution against the arbitrary action of the State.

NOT A SILENT SPECTATOR

(1) Guardian of Constitution under Art 32

→ writs to guard FRs → Habeaus Corpus
→ Mandamus
→ Quo Warranto
→ Prohibition
→ Certiorari

(2) Judicial Review

Monumental cases → Kesavananda Bharati case
→ Maneka Gandhi case
→ Puttaswamy case

③ Public Interest Litigation

→ No locus standi

→ Promoted by Justice VK Iyer & PN Bhagwati

→ Prison Reforms

④ Ability to do pronouncements in order to do complete justice under A 142

⑤ Maintain independence of judiciary through Collegium system in three judges cases

NOT PASS POLICY PRESCRIPTIONS

① undermines will of people as legislators are duly elected while judiciary is nominated.

② Against principle of separation of powers

③ Leads to counter legislation and a back and forth with Parliament.

Don't write anything this margin (space was left for examiner's use)

(4) cause of inconsistency among states

(5) delays administration due to long winded judicial processes and appeals to SC

WAY AHEAD

The founders of our constitution accorded great powers to the judiciary to safeguard against a despotic state should the situation arise.

However judicial activism should not become judicial adventurism.

Therefore, ~~executive~~ legislature should focus on consensus led laws and judicial activism should be selectively used to safeguard democratic rights.

Don't write anything in margin

12. Local bodies have the constitutional status of being a third tier of the government, but are simultaneously subordinate to the State Government in several key functions and aspects. Analyse. (250 words) 15

स्थानीय निकायों को सरकार के तृतीय स्तर का संवैधानिक दर्जा प्राप्त है, लेकिन साथ ही कई प्रमुख कार्यों और पहलुओं के संदर्भ में ये राज्य सरकार के अधीनस्थ भी हैं। विश्लेषण कीजिए।

73rd and 74th Amendments created a third tier of governance via Panchayati Raj and Municipalities.

CONSTITUTIONAL PROVISIONS

1. Three tiered Panchayati Raj structure at village, block and district level
2. Direct elections at all three tiers
3. Reservations for :→
   1. Women → 1/3rd seats
   2. SC/STs → Proportion of population
   3. BCs → If state desires
4. Gram Sabha → all members on electoral role of village
5. Municipalities, Municipal Corporations,

Don't write anything this margin

Notified Area Committees, Town Area Committees at urban level

6. Powers and ability to tax as per devolution done by States in 11th & 12th schedules respectively.

HOWEVER THEY REMAIN SUBORDINATE TO STATES

1. Limited devolution of powers

2. Less fiscal space as dependent on grants

3. Resistance to raise taxes → post GST tax net has decreased (Octroi, etc subsumed)

4. Large variations in how states share power

5. Lack of capacity building initiatives.

WAY AHEAD

1. If done correctly, local governance can do wonders in last mile governance :⇒
   a. Kudumbshree in Kerala
   b. village volunteer programme in AP

Don't write anything in margin (इस भाग में कुछ ना लिखें)

(2) states are too big and unwieldy institutions for local governance

(3.) Local delivery has gained more prominence in the light of COVID-19 (DM funds)

(4.) Tax base should be increased through Municipal loans, more devolution.

(5.) Increase the devolutions of power under 11, 12 schedules.

Good governance ~~of~~ at local level can help states fulfill the aspirations under A. 40 of our Constitution.

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Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. It is not only institutional challenges faced by Election Commission but also the twin threats of money and muscle in Indian electoral politics that need to be addressed for free and fair elections in India to continue. Discuss.

(250 words) 15

न केवल निर्वाचन आयोग द्वारा सामना की जा रही संस्थागत चुनौतियों, बल्कि भारतीय चुनावी राजनीति में धन और बाहुबल के दोहरे खतरे के मुद्दे को भी भारत में स्वतंत्र और निष्पक्ष चुनाव जारी रखने के लिए संबोधित किए जाने की आवश्यकता है। चर्चा कीजिए।

The Election Commission (EC) is a premier Constitutional body entrusted with conduct of free & fair elections throughout country.

INSTITUTIONAL CHALLENGES

1. Lack of permanent reserve of officer cadre
2. Govt. majority in selection panel for CEC and other ECs
3. Election Commissioners (ECs) can be removed on advise of CEC.
4. CEC is not debarred from holding public office after retirement
5. All decision-making is through majority
   → even a dissent of EC cannot seek review

TWIN THREATS OF MUSCLE AND MONEY

1. EC does not have resident officers and personnel at ground to validate muscle power

2. Rampant cases of money dole outs prior to election go unchecked (Hazrabad case recently brought this to light)

3. Electronic ballot has reduced booth capturing but can't check undue influence or kidnapping

4. Reports of violence and political vendetta post WB elections recently.

5. EC cannot ~~stop~~ suo moto legislate to bring electoral finance transparency.

6. Criminalization of politics → Over 30% elected MPs have serious allegations.

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Addressing Institutional & Influential (Money + Muscle) Challenges:⇒

1. Exploring state sponsored election funds to parties to curb role of money

2. making search committees more broad based with a plurality of judges as majority for EC.

3. Curbing reappointment / Parliament seats for ECs

4. Bringing in a dedicated election management cadre and personnel system to build institutional memory.

5. Fast track courts to expedite trials against elected officials.

Free & fair elections form bedrock of our democracy and empowering reforms in EC are the need of the day.

14. Fiscal federalism in India has evolved with time. Discuss in light of the developments in recent years. (250 words) 15

भारत में राजकोषीय संघवाद समय के साथ विकसित हुआ है। हाल के वर्षों के घटनाक्रम के आलोक में चर्चा कीजिए।

Indian federalism as enshrined in Constitution sets power-sharing between Central and state Government.

CONSTITUTIONAL PROVISIONS FOR FISCAL FEDERALISM :→

① Levy of taxes

	Centre	State
On Income	Income Tax Corporate Tax Min Alternate Tax	Tax on agri income Professional tax
On Expenditure		Motor Vehicles
On Assets	STT, CTT, CGT	Land Revenue

② Part X highlights the taxes related provisions → who can levy, collect and appropriate.

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(3) Central govt. can levy and appropriate only
i. Cess (except compensation cess)
ii. Surcharge

(4) Centre can borrow from within or outside country but states can borrow only within.

(5) Finance Commission under A 280 for devolution

Key developments :=>

(1) 11th & 12th FC brought in realms and changes.

(2) 101st CAA brought in GST Act creating a single national market

(i) No cascading taxes

(ii) Tax only on value addition

(iii) Consumption based regressive indirect tax

(iv) Slab based rates (0, 12, 15, 18, 28%)

(v) Compensation cess (revenue neutral) to states

(vi) Exemption of certain items from ambit.

(3) Centre has allowed states to borrow from Consolidated Sinking Fund to a prescribed limit in light of pandemic

(4) Provision of back-to-back loans in lieu of GST compensation cess.

(5) Additional 2% borrowing limit of states → 0.5 unconditional, 1.5% conditional on reforms like ONORC, etc.

(6) North-South divide over loss of funds in light of new terms of reference for 12th FC (one premise → population)

(7) Increasing noise of over centralization around GST.

(8) Co-operative Federalism structure through GST Council.

So the fiscal relations between centre and state government are getting transformed from one-directional grants structure to a more competitive and collaborative structure in line with the diverse demands of the nation.

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15. What do you understand by Constitutionalism? Do you think a written constitution is a necessary condition to ensure Constitutionalism? Also, analyse various provision of the Indian constitution that ensures Constitutionalism.

(250 words) 15

संविधानवाद से आप क्या समझते हैं? क्या आप मानते हैं कि संविधानवाद को सुनिश्चित करने के लिए लिखित संविधान एक आवश्यक शर्त है? साथ ही, संविधानवाद को सुनिश्चित करने वाले भारतीय संविधान के विभिन्न उपबंधों का भी विश्लेषण कीजिए।

Constitutionalism refers to limiting powers of the state, agreement on minimum standards to cooperate and fulfill the aspirations of people through a commonly agreed upon charter called constitution which defines and alienates powers of the government.

It seeks to fulfill the mandate of the people who created the Constitution.

Constitutions across democracies can be either written (India) or unwritten (U.K.)

~~Through explicit codification written Constitutions can ensure~~

Written Constitutions are necessary but not sufficient condition for Constitutionalism

NECESSARY

1. Explicit codification of laws
2. Separation of powers b/w executive, judiciary and legislature
3. Enumerates how to fulfill aspirations.
4. Source of rights and claims of citizens in return for their loyalty
5. Leaves no lesser room for ambiguity among various groups.

NOT SUFFICIENT

1. Should be seen to be favoured by large sections to enjoy legitimacy (Taliban)
2. Should create representative institutions else cause of conflict
3. Can empower dictatorial tendencies and usurping of power by few (Russia)
4. Nations with unwritten constitution function quite well on precedents like U.K.

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Enabling provisions from Indian Constitution

1. Fundamental Rights (Part III) → political equality
2. Directive Principles of State Policy to ~~fulfill~~ create socio-economic equality
3. Independent judiciary with judicial review powers
4. Flexible legislature with amendment powers to make corrections
5. Less stable but more powerful & responsible executive to usher in social reform.

Thus, we see that Indian Constitution seeks to fulfill the goals of liberty, equality, fraternity and justice as articulated in our Preamble by ensuring Constitutionalism.

16. It has been argued that digital monopolies pose a threat to the fundamental fabric of market-competition. In this context, examine the effectiveness of the regulatory framework in India to deal with digital monopolies. (250 words) 15

यह तर्क दिया जाता है कि डिजिटल एकाधिकार बाजार-प्रतिस्पर्धा के मौलिक ताने-बाने के समक्ष खतरा उत्पन्न करता है। इस संदर्भ में, डिजिटल एकाधिकार से निपटने के लिए भारत में नियामकीय ढांचे की प्रभावशीलता का परीक्षण कीजिए।

Digital monopolies denote the collectivity of a few digital corporations who have come to establish a global hegemony over the world's digital milieu. eg Facebook, Microsoft, Amazon, Google

THREAT TO MARKET-COMPETITION

1. Unfair use of market share → Google's Android devices have pre-installed Youtube

2. Aggressive acquisition spree
Facebook acquired Whatsapp, Instagram

3. Creating closed ecosystems
Apple operates only on iOS

4. Denying right to repair
Launch of newer version obliterates existing device

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(5.) Non-transparent self-regulation
Twitter banned Trump but not others

(6.) Harming public interest for own-self interest
Facebook whistle blower → Angry button used to promote hate. FB could filter only 5% of hateful content contrary to claims of 95%.

Effectiveness of current regulations

(1.) New IT Rules mandate compliance in terms of self-regulation and taking off content within stipulated timelines

(2.) Mandate on permanent and responsive grievance redressal officer

(3.) CCI has provisions to check anti-competitive practices and prevent monopolization

(4.) Safeguards available to citizens against publishing of naked pictures

(5.) Compliance in data sharing for enforcement of law and order

(6.) Data Digital → store data within Indian Servers

...ment rules

Gaps which still remain

1. weak enforcement → data storage and localization not complied by till date

2. Overlapping jurisdiction → with other countries

3. Policy lacunae → only peripheral issues have been addressed

4. Lack of alternatives → monopolies have created systematic dependency across economy.

5. Use of policies for political ends

Thus, we see that while regulations exist to check digital monopolies, a lot needs to be done to create a free and competitive digital market.

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17. The Central Bureau of Investigation (CBI) is often cited as an example of the rising politicisation of public institutions. In this context, identify the issues associated with the CBI's functioning. What steps can be taken to address these issues? (250 words) 15

केंद्रीय अन्वेषण ब्यूरो (CBI) को प्रायः सार्वजनिक संस्थानों के बढ़ते राजनीतिकरण के उदाहरण के रूप में उद्धृत किया जाता है। इस संदर्भ में, CBI की कार्यप्रणाली से संबद्ध मुद्दों की पहचान कीजिए। इन मुद्दों का समाधान करने के लिए क्या कदम उठाए जा सकते हैं?

The Central Bureau of Investigation (CBI) is the premier investigative agency of Central Govt. constituted under Delhi Special Forces Act.

MARRED BY RISING POLITICISATION

1. Accused of becoming Centre's instrument against states with opposition rule
2. Govt. has wide ranging powers W.r.t appointment of head
3. SC had in the past openly criticized political favoritism by CBI head (Ranjith Sinha)
4. CBI cannot directed to carry out independent investigation in states without consent.

ISSUES

1. Against the principle of cooperative federalism

2. CBI inquiries used as tools for mobilizing favourable public opinion.

3. Undermines institutional hegemony and responsibility → people will lose faith

4. Can be a source of frequent cases and judicial burden.

ADDRESSING THESE ISSUES

1. 2nd ARC → Make selection committee more broad based with minority of government representation

2. Give CBI constitutional safeguards ensuring independence:=>

   a. Changing salary on CFI

   b. Making removal difficult at par with CAG/CEC

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(3) CBI heads should not be reappointed in public office

(4) Avoid changing tenures and transparency in granting extensions.

(5) Building a framework for timebound investigations and trials.

(6) Separate tribunal to expedite CBI investigations.

These recommendations can go a long way in restoring public confidence in CBI.

18. The focus of policy and governance has hitherto primarily been on output rather than the outcome. Not only does the Aspirational District Programme mark a change in the policy focus but also chooses a collaborative form of governance over a top-down approach. Analyse. (250 words) 15

नीति और शासन का ध्यान अभी तक मुख्य रूप से आउटकम (परिणाम) के बजाय आउटपुट (मात्रा) पर केंद्रित रहा है। आकांक्षी जिला कार्यक्रम न केवल नीतिगत केंद्रबिंदु में परिवर्तन को चिन्हित करता है, अपितु टॉप-डाउन एप्रोच (शीर्ष-पाद उपागम) के बजाय शासन के सहयोगात्मक शैली को अंगीकार करता है। विश्लेषण कीजिए।

The Aspirational Districts Programme is an initiative to expedite the developmental outcomes in 114 most backward districts on a wide range of socio-economic parameters.

~~From output → Outcome~~

From output → Outcome

① Goals aligned on detailed outcomes rather than merely on scale & output

② Focus on micro-units → districts rather than broad policy for state

③ Success measured in terms of delta change between baseline measures and achieved outcomes

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(4.) Coordination done by a joint secretary at district level rather than DM.

(5.) Mainstreaming inclusiveness → by obsession on bringing change for the most backward areas.

Top-down → Collaborative

(1.) Decentralized execution at ~~state~~ district level

(2.) NITI Aayog has created data visibility through Champions of Change portal.

(3.) Districts to show improvement across melange of outcomes in decentralized way rather than monolithic schemes of centre.

WAY AHEAD

The aspirational districts programme encapsulates the goal of Sarvodya.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

True governance lies in inclusiveness and by mainstreaming most backward districts we are moving in the right direction of Sabka Sath, Sabka vikas.

Don't write anything this margin

19. While various government initiatives and policies have created opportunities for Self Help Groups (SHGs), there are challenges that still persist. Discuss. (250 words) 15

जहाँ विभिन्न सरकारी पहलों और नीतियों ने स्वयं सहायता समूहों (SHGs) के लिए अवसरों का सृजन किया है, वहीं कुछ चुनौतियां अभी भी विद्यमान हैं। चर्चा कीजिए।

Self Help Groups (SHGs) refer to collectives formed with the explicit purpose of enterprise through joint ownership and joint contribution.

Importance of SHGs :⇒

① Empower women (Amul, Lijjat Papad)

② Promote micro-finance (Grameen Bank)

③ Promote entrepreneurship as an individual may lack initiative / knowledge

④ Aid in rural development (Town of Anand in Gujarat)

⑤ Foster communal harmony & solidarity through co-ordination

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Government Initiatives :⇒

1. Right to form associations a fundament right under A 19
2. State shall seek to promote cooperatives under DPSP (A 42(B))
3. Priority sector lending for SHGs by RBI
4. Interest subvention and collateral free credit provision under MUDRA
5. Schemes for development
   ↳ Formalization of FPOs

Existing challenges

1. Finite risk of moral hazard
2. Bunging together more SHGs during COVID-19
3. Lapses in scheme implementation
   - → Bureaucratic red tape
   - → Banks not passing on rate cuts by RBI
   - → Etc.
4. Challenge from big corporates entering rural markets

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~~Government initio~~

(5) Ineffective skill development and extension services to upgrade vocational knowledge

(6.) Patriarchal and conservative mindset precludes coming together of women/ people from other castes.

The Grameen Bank has shown the power of SHGs to transform a nation and we must overcome intermittent challenges to ensure sustained rural development.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

20. The principal constraint for India is trying to find solutions to 21st century problems using 19th century government structures. Discuss. **(250 words) 15**

भारत के लिए प्रमुख बाधा 19वीं सदी के सरकारी ढांचे का उपयोग कर 21वीं सदी की समस्याओं का समाधान खोजने का प्रयास करना है। चर्चा कीजिए।

The paradox of governance today is invoked in ever changing nature of problems but painstaking slow response by government.

21st Century Problems

1. Cyber security Threats

2. Digital savy electorate is getting disillusioned with babudom & office culture

3. Fast evolving transaction systems like cryptocurrency

4. Imminent and impending climate crisis.

5. Threat to national security not just from AI and hypersonic missiles but also from pandemics and diseases like AMR.

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19th century Govt. orientation

1. Lack of sensitization to LGBTQ, environment and transgender rights

2. Colonial mindset of might is right doesn't work in an environment of asymmetric warfare & 5th generation warfare.

3. Slow pace of development initiatives and file culture in administration

4. Lack of transparency in decision-making and less participative policy formulation

5. Archaic motion of regulate and prohibit first and research later leading to potential black swan events.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

WAY AHEAD

1. Mainstreaming e-governance initiatives

2. Investment in R&D for new age threats and developing thought leadership

3. Capacity building and training of administration at entry, mid-career stages in line with present day challenges

4. Lateral hiring & training in technocrats in line with 2nd ARC recommendation

5. Getting work done through advanced data mining → better insights → use of AI in decision making.

The current initiative of Mission Karmayogi is a step in right direction to ensure and realise the true goal of Sevottam.

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GENERAL STUDIES (TEST CODE : 1985)

Name of Candidate	Anand Mallotra		
Medium Eng./Hindi	English	Registration Number	1018150
Center		Date	27/12/21

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
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18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

margin (इस भाग में कुछ ना लिखें)

1. On the vast panorama of world literature, Kalidasa is considered as a literary genius, second to none. Discuss in the context of writings of Kalidasa. (150 words) 10

विश्व साहित्य के विशाल दृश्यपटल पर, कालिदास को एक अद्वितीय साहित्यिक प्रतिभा माना जाता है। कालिदास की रचनाओं के संदर्भ में चर्चा कीजिए।

The prodigious work of Kalidasa under Chandragupta II is a testament to his literary genius

* His eponymous work in the form of Abhignana Shakuntalam is considered a cult classic prompting ~~colon~~ orientalists to call him Shakespeare of India.

* The longing of a beloved in a faraway land is a masterpiece we experience via his poems addressed to the cloud in Meghadutam

* His treatise of poems like Ritusamhara (seasons) and Raghuvam-sham

one classic Sanskritic works

* He produced voluminous plays which received wide court patronage like:⇒

→ Urvasamvashi (Celestial Nymph)

→ Kumarasambhava (Kartikeya)

→ Malvikagnimitra (Sunga Prince)

* His work coincided with a time when Sanskrit was at its zenith and he was the master

* This is why he was made one of the 9 gems in the Gupta court

It is this prodigious genius of his work that he has been deservedly called 'Mahakavi' or the great poet.

margin (मूल प्रश्न के मूल का विस्तार)

2. Tracing the evolution of Shaivism in India, discuss the various philosophical schools associated with it. (150 words) 10

भारत में शैवमत के विकास का अन्वेषण करते हुए, इससे संबंधित विभिन्न दार्शनिक संप्रदायों की विवेचना कीजिए।

Shaivism refers to a body of philosophical cognition dealing with Lord Shiva

* Earliest mention is incidental in the Indus Valley seals where a similar Pashupathi Mahadeva & linga worship can be seen although it is not proven if it was indeed Shiva

* The Rigveda refers to a lord Soma in the 9th Mandala who is the foremost god and the term Somyas is attributed to him

* During Gupta period, we learn of development of Vaginayana which was a juxtaposition of Shaivism, Buddhism and Shakti (Tara)

* The ascetism as enshrined in the cave free Ajivikas (Mekhalati Ghosha) has ~~cognitive~~ ritualistic consonance with Nath school of shamism.

* During the Maurryan & Post Maurryan period as well we see mention of Shiva through his Ayudha (weapon) in sculpture.

* Shamism received patronage under Rashtrakutas whose caves have famous Shiva-Parbati wedding & Ravana shaking Kailasha paintings

* The zenith of Chola sculpture in form of Natarajа idols testifies philosophical perpetuity of Shaivism which has continued through Brihadeshwara temple, Tirupanja Temple, Gokarnath temple over different centuries.

3. Starting from the creation of world's first dock, India's maritime history is simply astonishing. Elucidate.

(150 words) 10

विश्व के पहले बंदरगाह के निर्माण से लेकर, भारत का समुद्री इतिहास आश्चर्यजनक है। विशदीकरण कीजिए।

As Dholavira became the UNESCO world heritage site, Indians were compelled to unravel at our maritime history.

* Indus valley people pioneered the first dock at Lothal

* They had contacts with Bahrain, Oman and Mesopotamia people who called India as Meluha

* Dholavira is a fine testament to our maritime prowess 2500 years before christ in ancient era

* The cholas had used their naval prowess in spreading Indian culture.
  - ↳ Imperial control of Sri Lanka
  - ↳ Captured Maldives
  - ↳ Attack on Sri Vijaya Empire

* Ideals of Buddhism spread to South East via the sea route

* In modern era, it was the sea which defined the battle between colonial powers (Portugal & Britain → battle of Swally 1612)

* There was a thriving shipbuilding industry in the Vijayanagara empire

* The Red Sea trade with Arabs had lured the Europeans towards India (Vasco da Gama).

* The lack of naval strength spelt doom for the Mughals but their naval prowess became a strength for Marathas.

Thus, our naval history holds an astonishing career spanning many millenia

4. The huge strides India took towards modernisation under Lord Dalhousie were borne out of necessity rather their benevolence. Examine. (150 words) 10

लॉर्ड डलहौजी के कार्यकाल के अंतर्गत आधुनिकीकरण की दिशा में भारत ने जो अत्यधिक प्रगति की थी, वह परोपकार के बजाय आवश्यकता से अधिक प्रेरित थी। परीक्षण कीजिए।

Lord Dalhousie's ascent as governor general of the English East India Company (EIC) saw huge strides towards modernisation ⇒

(1) The railway lines were laid for the very first time from Thane to Mumbai. In future, these will go on to connect the hinterland

(2) The first telegram lines were set under his stewardship redefining communication technology

(3) The Wood's Despatch which led to expansion of modern education came in 1854 under him

(4) There was administrative modernization brought in through

Charter Act 1855 which opened administration recruitment to Indians.

(5) Also it separated the legislative and executive ~~[illegible]~~ parts of the governor general's council and laid foundation for local representation

Born out of necessity

→ Railways brought in raw materials
→ Telegraph coordinated armies
→ Civil administration a colonial power
→ Education reforms an acculturation tool in face of increasing discontent

Shashi Tharoor in 'An Era of Darkness' has rightly noted that these steps stemmed from British primacy rather than Indian concern.

margin (दिए गए हैं मत प्रयोग करें)

5. Indian women, cutting across identities, increasingly participated in the anti-colonial and democratic movements since 1930s. Discuss.

(150 words) 10

भारतीय महिलाओं ने पहचान से ऊपर उठकर, 1930 के दशक से उपनिवेशवाद-विरोधी और लोकतांत्रिक आंदोलनों में बढ़चढ़ कर भाग लिया। चर्चा कीजिए।

The mass participation of women in national discourse was first enabled by Gandhiji in Non-Co-op movement and it endured and grew strong since the 1930s.

* Sarojini Naidu campaigned successfully for a stronger & greater role for women in Dandi March

* women revolutionaries like Kalpana Dutt (Chittagong Armoury), Bina Das (shot point blank at DC) and Suniti & Shanti led the anti-colonial charge.

* Aruna Asaf Ali and Usha Mehta led the women mobilization during the Quit India Movement in 1942

* women remained at the forefront of Indian National Army (INA) under Captain Lakshmi who led the women regiment in Singapore.

* Gandhi had helped mobilize women's interest like anti-alcohol ethos and struggle for equality
  ↳ Common women participated enthusiastically

* Mirabehn, Sister Nivedita advocated for social reforms

* Rajkumari Amrit Kaur represented the women as the first health minister in the first government of independent

Thus, women strengthened anti-rhetoric & anti-colonial rhetoric against the British post 1930s.

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6. North-East India threw up constant challenges to the British hegemony in India. Discuss in the context of anti-colonial struggles in the region. (150 words) 10

पूर्वोत्तर भारत ने भारत में ब्रिटिश आधिपत्य के प्रति निरंतर चुनौतियां उत्पन्न कीं। इस क्षेत्र में उपनिवेशवाद-विरोधी संघर्षों के संदर्भ में चर्चा कीजिए।

The British attempts at subjugation of North-East consistently met with resistance.

Hidden of revolts

* Moamaria Revolt (Assam) → Against the colonial proximity to ruling Ahom elites.

* Ahom Revolts (Assam) → Against the British takeover of ancestral lands

* Singhpo Rebellion in Assam

* Naga Revolt → by the indigenous Naga tribes whose traditional way of life was challenged by British exclusionary forest laws as well as excise on liquor

* Kuki movement → mobilized north eastern tribes in huge numbers

* Naga and Zeliangrong movements → under Rani Gaidinliu mobilized locals against British & Kohima

* Imphal Campaign of INA

Finally, under the Gandhian Verrier Elwin the British had to finally give in to an isolationist policy to pacify the tribes but that did not address the north-eastern border challenge from prospective Japanese threats.

Hence, North-East was a source of constant challenges for the British.

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7. British rule brought profound political and economic changes in the Malaya region. Discuss. (150 words) 10
ब्रिटिश शासन ने मलय क्षेत्र में गहन राजनीतिक और आर्थिक परिवर्तन किए। चर्चा कीजिए।

The British colonization of the Malaya region brought modernizing and profound changes across the economic and political spectrum.

Economic changes

→ Monetization of Malayan economy through plantations for rubber and timber

→ Inflow of Chinese and Indian labour in plantations

→ Colonial control over economy led to a drain of domestic GDP

→ Malayan infra → transformed Singapore → Malaysian Public risk at the behest of colonial enterprise

Political changes

→ United diverse regions politically for the first time

→ Increased racial tensions between Indians, Malay and the chinese

→ Non-equal growth led to assertive Brunei and singapore regions

→ Challenges in reconciling & sharing administrative under 9 sultans.

Thus British rule was transforming for Malaysia.

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8. The Spanish Civil War proved to be a 'One Big Dress Rehearsal' for the Second World War. Discuss. (150 words) 10
स्पेन का गृह-युद्ध द्वितीय विश्व युद्ध के लिए 'एक बड़ा पूर्वाभ्यास' सिद्ध हुआ। चर्चा कीजिए।

The Spanish civil war gave the ground to an impending world war.

It was orchestration of anarchy and civil unrest at the behest of axis powers (Germany, Russia Italy)

It was to be used as a testing ground to gauge the plausible reaction from the British and USA who had sworn to isolation)

It was premised on non-intervention of these actors

due to economic crisis of 1929.

The hypothesis proved shoddy and gave the Axis powers a taste of blood in their quest for hegemony (especially lebensraum).

This paved the way for attack on Poland due to non-intervention earlier acting as dress rehearsal for WW II.

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9. The 'cutting of Chinese melon' was a landmark event in the history of imperialism. Discuss. (150 words) 10

'चीनी खरबूजे का बटवारा' साम्राज्यवाद के इतिहास में एक ऐतिहासिक घटना थी। चर्चा कीजिए।

The cutting of the chinese melon refers to the opening up of chinese markets for colonial pursuits of a wide range of industrialized nations.

It opened up the hitherto secluded chinese nation for colonial interests of the British, US, French and Japanese.

Impact :-

→ marked the decline of the mighty chinese Empire

→ Proliferation of opium trade

→ Development of port cities to suit colonial interests

→ Subjugation of Chinese populace and lack of self-determination

→ Social impact of opium trade

→ Drain of wealth as China became a gateway for cheap raw material as well as market for colonial products.

→ Co-operative competition between colonial powers for a slice of melon in the trade.

It is on this account that China even today treats this period as its darkest hour

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10. The Chipko movement became a symbol of many such popular movements emerging in different parts of the country during the 1970s and later. Analyse. (150 words) 10

चिपको आंदोलन 1970 के दशक के दौरान और उसके उपरांत देश के विभिन्न भागों में उभरने वाले ऐसे कई लोकप्रिय आंदोलनों का प्रतीक बन गया। विश्लेषण कीजिए।

The Chipko Movement captured the popular imagination as the women of Tehri-Garhwal lay hugging the trees under mobilization by Sundarlal Bahuguna.

Inspired similar movements

* Appiko Movement in South India against uprooting of trees

* Narmada Bachao Andolan by Medha Patkar and Baba Amte against displacement of indigenous against developmental dams

* Several local environmental movements as well as Gen Mahdhan and 'Vrikshamparal at the ground level.

Reasons for inspiring movements

→ Symbolism was emotive as it recalled the bond the paternal relations of the women (women depended on trees for ~~food~~ fuel and shade)

→ Gandhism in the manner of protest captured the national resistance

→ Success in convincing authorities to abandon planned deforestation served as a model for similar protests without violence.

The act of hugging a tree to protect it became a revolutionary idea which enthralled several ~~prominent pro~~ successive environmental and rights movements.

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11. Highlighting the unique features of Vesara style, discuss how it symbolizes confluence of Dravidian and Nagara temple architectures. (250 words) 15
वेसर शैली की अद्वितीय विशेषताओं को रेखांकित करते हुए, चर्चा कीजिए कि यह कैसे द्रविड़ और नागर मंदिर स्थापत्य कलाओं के संगम का प्रतीक है।

The vesara style of architecture originated under Chalukyas and reached its zenith under the Rashtrakutas and Hoysalas

Key vesara architectures :⇒

* Badami Temples
* Durga temple and Lad Khan temple at Aihole
* Pattadakal group of temples (including Virupaksha temple)
* Kailashnath temple at Ellora
* Elephanta caves
* Hoysaleswara temple, Halebidu
* Chennakeshava temple, Belur

It is well known for the distinctive and intricate overlay of carvings on its vimana.

In Chennakesava temple for example there is not an uncarved inch on the shikhara or vimana.

Further, the entire outer surface appears carved without presence of straight lines → rather curvilinear pillars.

This architecture was a synthesis of both Dravidian and Nagara temple architecture.

→ It adopted the palatial gateways from Dravidian gopurams

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→ The ishtakana had synthesis of both vesara Nagara style and conical shikhara Dravidian style

→ The mandapas are modern and closer to nagara style while garbhagriha resembles Dravidian style

→ It has carvings of Yamuna, Ganga and Maithuna + Dwarapal from both schools in entry to garbhagriha.

The Pattadakal temples at Bihole symbolize this transition as they had 4 Nagara and 4 Dravidian style temples

12. The roots of Indian classical music date back to ancient India. Elucidate. Also, distinguish between Hindustani and Carnatic music. (250 words) 15
भारतीय शास्त्रीय संगीत की जड़ें प्राचीन भारत में निहित हैं। विशदीकरण कीजिए। साथ ही, हिन्दुस्तानी और कर्नाटक संगीत में भी अंतर स्पष्ट कीजिए।

Indian classical music predates to the ancient period finding mention in Samveda

The Early vedic age placed an important premium on ritualistic performance of yagnas composed to tunes in adherence with Samveda verses and its upveda (Gandharva)

With the late vedic age, the vibrat singing got a further fillip with specialized roles for who will sing, who will set the tone and meter and the priest to oversee the correct enunciation.

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ancient sculptures places Narada as the primitive man responsible for origin of music.

Further with development of dance and theatre like Natyashastra by Bharat Muni and Nandikeshwara works, classical music got a further bolstering due to royal patronage.

eg → ~~Samp~~ Vin Vasadatta gives a glimpse into music during gupta period.

→ Samudragupta's coins show him playing the veena

difference between Hindustani and Carnatic music

Hindustani	Classical
① There is a greater emphasis on Rasa	① Emphasis is greater on Bhava and meter than Rasa
② Sub-divided into Khayal, Dhrupad and Tarana	② Sub-divided on lines of early school and later school
③ Tansen, Bhimsen Joshi, Gangubai Hangal	③ Annamacharya, Kshetrya, Purandara, Tyagaraja, Syama Sastri
④ Evolved under Persian influence (Amir Khusrau) as court dance	④ Maintained its immaculateness and hence higher emphasis on adhering to ragas

Both schools have together built a colourful tapestry of our composite culture

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13. Given its inward-looking approach, the Indian School of philosophies still remain relevant in the 21st century. Analyse. (250 words) 15
भारतीय दार्शनिक संप्रदायों की अंतर्मुखी दृष्टिकोण को देखते हुए, यह अभी भी 21वीं सदी में प्रासंगिक बना हुआ है। विश्लेषण कीजिए।

Indian school of philosophies have endured and persevered over 500 years of humankind due to its inward-looking approach.

Relevance in 21st century

* Existentialism as enunciated in Upanishads in Nachiketa's quest for true knowledge guides the shaken soul in existential crisis due to modernization, consumerism and climate change

* The parable of Ahimsa (Non-violence) was propounded in

Buddhism and Jainism is much needed as we confront neo-colonism, genocide and terrorism.

* Kanad's atomization not only has cognitive cognisance with nuclear technology but also with looking inwards.

* The best inward looking contemplation was done by Buddha when he posited his Ashtangika Marg on the 8 Noble Truths which compel one to focus on right livelihood (against terrorism today), right speech (against hate speech), right mindfulness (against lack of empathy)

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* Mundaka Upanishad's 'Satyameva Jayate' on Truth is always victorious is a consequence of this mind-orientation.

* Guru Nanak stood for a steadfast honest living and advocated personal and bodily purity through 'Nam Japana, Kand Chakhna' as we grapple with unending greed

* due to capitalism and corruption

* The Jain precepts of Asteya (non-stealing), Aparagrahika (non-possession) are universal

truth, the Indian school of philosophies have remained relevant in the 21st century

14. World War I brought in socio-economic dislocation for nearly all sections of the Indian population, paving the way for the necessary social mobilization for an impending mass upsurge. Elaborate. (250 words) 15

प्रथम विश्व युद्ध भारतीय जनसंख्या के लगभग सभी वर्गों के लिए सामाजिक-आर्थिक उथल-पुथल लेकर आया, जिससे आसन्न जन उभार के लिए आवश्यक सामाजिक लामबंदी का मार्ग प्रशस्त हुआ। सविस्तार वर्णन कीजिए।

The World War I (WW I) fought on imperial and colonial grounds antagonized nearly all sections of Indian population.

* It led to unprecedented price-rise and inflation on account of German blockade through submarines which hindered flow of goods and trades, thus, impacting the common masses

* The returning soldiers brought with them Spanish Flu causing widespread death and destruction and socio-economic ruin

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* The British oppression to realise more revenue for war loss was debilitating for peasants already under the perils of zamindari, ryotwari system.

* The relatively underdeveloped industry (initially) and blockage in the Atlantic had workers up in arms.
↳ factory & mill

* The nationalists and political elites (Congress and Muslim League (ML)) were antagonized on the crude display of death and destruction to maintain colonial hegemony.

* The Treaty of Sevres was especially damaging to morale of Muslims

This paved way for mass mobilization :>

① Champaran Satyagraha → 1st non-cooperation by peasants

② Kheda Satyagraha → 1st non-cooperation against land alienation

③ Ahmedabad Mill Strike against low wages

④ Rowlatt Satyagraha and the two Home Rule Leagues against colonial excesses

Thus, Gandhiji was able to start a mass mobilization bringing peasants, workers, nationalist and common populace in its fold.

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15. While the Indian capitalists were not in favour of protracted mass civil disobedience, many of them also acknowledged the utility, even necessity, of civil disobedience in getting crucial concessions for their class and the nation. Explain. (250 words) 15

जहाँ भारतीय पूँजीपति दीर्घकालीन समय तक चलने वाले सामूहिक सविनय अवज्ञा के पक्ष में नहीं थे, वहीं उनमें से कई ने अपने वर्ग और राष्ट्र के लिए महत्वपूर्ण रियायतें प्राप्त करने में सविनय अवज्ञा की उपयोगिता, यहाँ तक कि आवश्यकता को भी स्वीकार किया। स्पष्ट कीजिए।

The Civil Disobedience Movement (CDM) saw participation from myriad sections of the Indian society including the capitalists.

Reasons for bourgeoise support

→ Gandhi's 11 demands also had concessions for the industrial class

→ It culminated reducing the super-standing exchange rate in favour of Indian industries

→ The manner of mass struggle involved swadeshi which promoted

domestic consumption for goods thereby aiding Indian companies.

→ It also gave them leverage in negotiating with a desperate British administration.

Reasons for not a protracted mass struggle

→ Long term boycott and picketing of shops hurt the business environment

→ There were signs of workers becoming organized and aggressive as seen by the high turnouts at Dharsana Salt works

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→ It is not possible to sustain a mass struggle for long as it hits ordinary people who withstand consumption in the face of adversity.

→ Longer struggle meant prolonged workers absence hurting their production capability.

Thus, while initially industrialists showed enthusiasm for concession via CDM they were not in favour of a long term mass struggle as it was adversarial for their economic interests

16. The acceptance of partition by the Indian National Congress was only the last stage of the process of gradual concessions given to the Muslim League. Critically discuss. (250 words) 15

भारतीय राष्ट्रीय कांग्रेस द्वारा विभाजन की स्वीकृति वस्तुतः मुस्लिम लीग को दी गई क्रमिक रियायतों की प्रक्रिया का केवल अंतिम चरण था। समालोचनात्मक चर्चा कीजिए।

The acceptance of Partition by Indian National Congress (INC) was a protracted step against Muslim League (ML) shenanigans.

History of gradual concessions

* Acceptance of religious demand for the first time in its official demand during NCM movement (Khilafat issue)

* Deadlock created by the Delhi Proposals and Jinnah's 14 demands against Nehru Report in 1928.

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* Discarding August offer of 1940 which gave a virtual veto to ML

* Giving in to Wavell Plan, which brought ML on an equal footing with the INC and also contributed to its success in 1946 Elections.

* Acceptance of Cabinet Plan Proposals in 1946 to a govt structure based on Part A, B, C states (religious lines)

* Desai-Liaqat Pact and Rajagopalachari Formula to break the constitutional deadlock

* Delay in discussion over Objectives Resolution (discussed & passed in Jan 1947) to accomodate ML and princely states.

The Direct Action Day and burgeoning communal riots (Noakhali) made the partition an ~~last resort~~ inevitable conclusion.

However, critics have argued that the partition could have been avoided if (1) The British not displayed the haste in leaving and creating constitutional crisis, (2) Acceptance of ML demands for power sharing.

Regardless of the criticism, the position on ground had become untenable to avoid partition.

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17. Over the course of the freedom struggle, especially after the Indian Council's Act of 1892, nationalist leaders in India transformed the Imperial Legislative Council, from a powerless machine functioning as a tool of endorsement of government policies into a forum for ventilating popular grievances. Discuss. (250 words) 15

स्वतंत्रता संघर्ष के दौरान, विशेष रूप से 1892 के भारतीय परिषद अधिनियम के पश्चात्, भारत में राष्ट्रवादी नेताओं ने साम्राज्यिक विधान परिषद को सरकारी नीतियों के समर्थन के एक साधन के रूप में कार्य करने वाली शक्तिहीन मशीन से सार्वजनिक शिकायतों को व्यक्त करने वाले एक मंच में परिवर्तित कर दिया। चर्चा कीजिए।

The nationalist leaders used the platform for voicing grievances each since non-official entry into the Imperial Legislative Council was allowed through Indian Councils Act 1861

* The Congress party was founded in 1885 and raised public opinion for more representative form of gover-nance

* Moderate leaders like Dadabhai Naoroji gave the economic drain

critique and slogan of 'No Taxation without representation'

* These demands led to the Indian Council Act 1892 which increase non-official seats as well as more deliberative powers

* The momentum from these debates further fuelled demand for passing budgets and decentralization of power which were ceded through ~~Montagu~~ Morley-Minto Reforms 1909

Post GoI Act 1919

* The Swarajists joined Councils and much to the dismay of British did not turn into an arm of the Empire.

* They gave impassioned critiques and were successful in defeating passage of Public Safety Bill, an autocratic piece of legislation.

* The bicameral legislatures post 1919 further ensured increased representations and voicing of concerns

* They also acted as a platform to burden government business in consonance with the nationalist mood and expose the truth of colonial desires to the masses via printing press

Thus, rather than a mere endorsing body, they formed their participation as a tool of dissent

18. From the Anglo-Afghan Wars to the US led Global War on Terrorism, Afghanistan has been a battleground for both internal and external actors. Explain. (250 words) 15

आंग्ल-अफगान युद्धों से लेकर संयुक्त राज्य अमेरिका के नेतृत्व में आतंकवाद के विरुद्ध वैश्विक युद्ध तक, अफगानिस्तान आंतरिक और बाह्य दोनों कर्ताओं के लिए युद्ध का एक मैदान रहा है। स्पष्ट कीजिए।

Afghanistan is majestically called the graveyard of empires.

battleground for internal actors

→ Heterogeneous demography of conflicting tribes as a result of centuries of acculturation from Persia & India.

→ Lack of socio-economic development has led to radicalisation and a schism between the women & elite on one side and Taliban on the other

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→ very strong and independent minded social ethos → From Dost Muhammad to other rulers, Afghans have been fiercely independent.

Battleground for external actors

→ strategic geographic location which connects resource rich Central Asia to South-East Asia

→ Historic gateway for invasions in India → British attacked it to safeguard from a Napoleonic Attack

→ Weak state and strategic location made it an attractive ground for US to train armed mujahiddin against USSR

→ Post soviet breakdown, absence of developmental discourse turned the Taliban against the US

→ Today its strategic location and drug trade is making it a pawn for influence between US and China

Thus right from the Anglo-Afghan wars, Afghanistan has seen battles within in house tribes as well as external actors who use lack of strong state as a breeding ground for proxy wars, oblivious to the Afghan spirit of individuality.

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19. The roots of the present Israel-Palestine conflict may be traced back to ancient history, however it is the 20th century which has shaped it in its modern form. Explain.

बर्तमान इज़राइल-फिलिस्तीन संघर्ष की जड़ों को पीछे जाकर प्राचीन इतिहास में खोजा जा सकता है, हालांकि यह 20वीं शताब्दी थी जिसने इसे आधुनिक रूप में आकार दिया। स्पष्ट कीजिए। (250 words) 15

The Israel-Palestine conflict is a fight between two cultures which has endured over centuries.

Ancient Roots

Ancient roots lie in the rise of Ottoman Empire and fall of first empire of Jerusalem

It lies in the alienation of Jews who have been the most persecuted community in the world both at the hands of Ottomans at first and later at Poland, Russia, France (Dreyfus Affair) and Germany in WW II (holocaust)

Modern form

Due to alienation, Jews had to settle in different parts and were always met with suspicion.

Persecuted for perceived role in Treaty of Versailles by Hitler through holocaust

Post WWII, Bidain as promised created a separate motherland for Israel from its former colonial possession through a two-state solution.
Thus alienated resident palestinians a muslim majority community.

Palestinians accordingly became refugees and this angered the Muslim Arab world.

The Seven day war that the Sinai of Egypt was decisively won by Israel who went on to extend its territory in Golan Heights, Gaza and West Bank

Over years Israel has persevered Hamas and PLO attacks and has increased its territories further despite Oslo Accord
The Abraham Accords mark a watershed moment for the conflict as it bolsters Israel's claim by its historic adversaries

Thus, this is an ongoing conflict spanning centuries

20. Despite its advocacy for peaceful resolution of disputes, highlight the factors that prompted India to use force to remove Portuguese colonial rule from its territories after independence. (250 words) 15

विवादों के शांतिपूर्ण समाधान के पक्षसमर्थन के बावजूद, उन कारकों पर प्रकाश डालिए जिन्होंने भारत को स्वतंत्रता के पश्चात् अपने राज्य-क्षेत्रों से पुर्तगाली औपनिवेशिक शासन को बाहर निकालने के लिए बल प्रयोग करने हेतु प्रेरित किया।

India has always stood by promotion of international peace and security → be it in our constitution (Art 51) or in the Objectives Resolution

However, it was compelled to resort to police action to remove Portugal from its occupation in Goa, Daman & Diu, Dadra & Nagar Haveli.

The Portuguese had captured these territories in the late 15th century

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→ Post-independence, most princely states had assimilated with Indian mainland

→ Goa remained an aberration wherein the majority indigenous population was Konkani and had Indian roots but was under sovereignty of minority Portuguese -

→ This revealed practical challenges of trade, commerce and social intercourse

→ National milieu in India was of self-determination and nation building → themes missing from the discourse in Portuguese territories

→ Reluctance and absolute denial of Portuguese regime to let go off

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Indian territories was met with strong ~~state under~~ anti-colonial local sentiment.

→ This sentiment and resultant protest was dealt cruelly with state machinery by Portugal

→ This provided grounds for direct police action by Indian forces to come to the aid of fellow konkan brethren.

Thus, India was prompted to resort to use of force to liberate Portuguese territories in 1961.

Portuguese territories at 1960

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GENERAL STUDIES (TEST CODE : 1986)

Name of Candidate	Anand Malhotra		
Medium Eng./Hindi	English	Registration Number	1018150
Center		Date	29/12/21

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
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Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसमें अंश को स्पष्ट रूप से काटा जाना चाहिए।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. Mukherjee Nagar Delhi- 110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

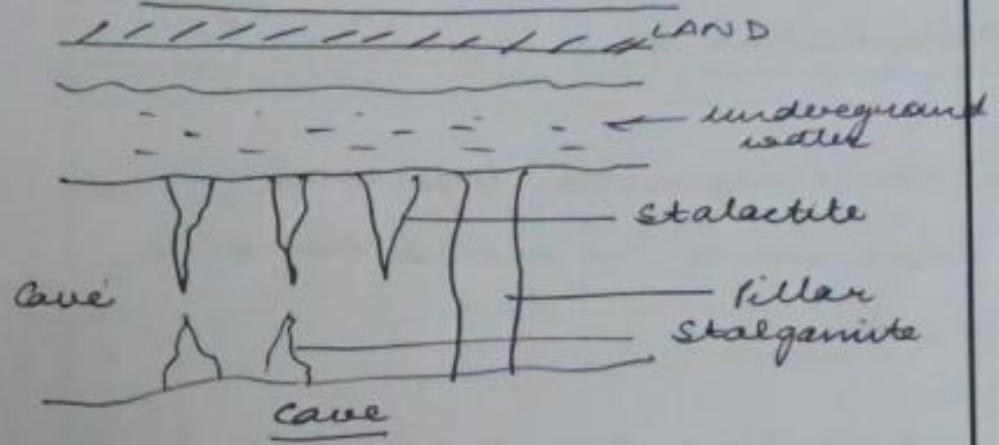
All the Best

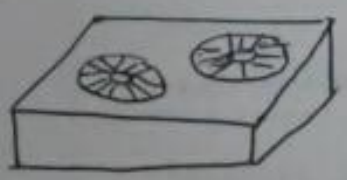
margin
(दूसरा भाग में उपयोग का लिखें)

1. Highlighting the conditions that are conducive for the formation of Karst topography, discuss its distribution around the world. (150 words) 10

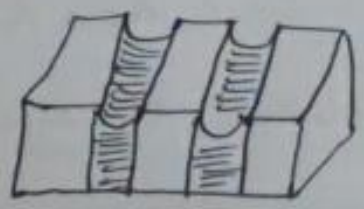
कार्स्ट स्थलाकृति के निर्माण के लिए अनुकूल स्थितियों को रेखांकित करते हुए, सम्पूर्ण विश्व में इसके वितरण की विवेचना कीजिए।

Karst topography is developed as a consequence of groundwater erosion in limestone rich areas.





Sink Holes



Uvalua

Conditions conducive for Karst

→ Dolomite and limestone containing overlying strata

→ Running groundwater / sea-water for erosion

→ Availability of hollow caves underneath for stalactite formation

Distribution :⇒

① Karst region in Yugoslavia from where the name has been given

② South East Asia & South Asia
↳ Thailand, Malaysia, Indonesia
↳ Vietnam has some of the most iconic caves in Halong Bay

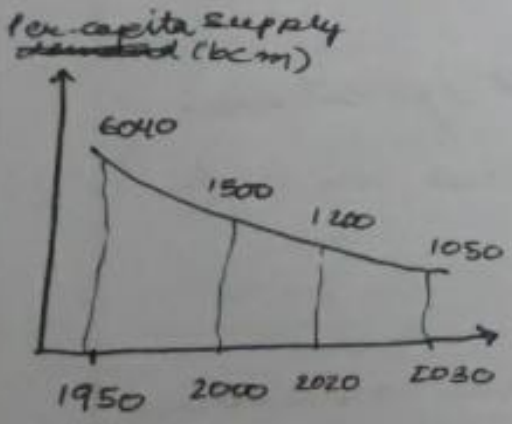
Thus, Karst topography is found across the world with conducive conditions in limestone rich areas.

margin
(हाशिए को छोड़ कर लिखें)

2. The extraction of groundwater in India has reached a level that is threatening the water security in the country. Analyse the guidelines issued by the Central Ground Water Authority in this regard. (150 words) 10

भारत में भौमजल का निष्कर्षण एक ऐसे स्तर पर पहुंच गया है, जो देश में जल सुरक्षा के समक्ष खतरा उत्पन्न कर रहा है। इस संबंध में केंद्रीय भूमि जल प्राधिकरण द्वारा जारी किए गए दिशा-निर्देशों का विश्लेषण कीजिए।

India has just 4% of the water resources in the world but it contributes more than 25% of Groundwater (GW) usage.



As per NITI's CWMI 2.0, by 2050 demand will be outstripped by supply by 2X causing 6% decline in GDP

Low Risk/Stress

High stress

Moderate stress

In this regard Central Ground water Authority has issued guidelines for wise-use

→ Entire area of country divided into zones basis water risk

→ Withdrawal caps and operational limitations on industries in high risk areas

→ Continuous water-table monitoring in these areas

→ Refusal on award for licensing in water guzzling enterprises

→ Provision to ration use below critical threshold.

Thus, these guidelines are an important beginning but need a 'Jan Andolan' to secure our water future by 2030.

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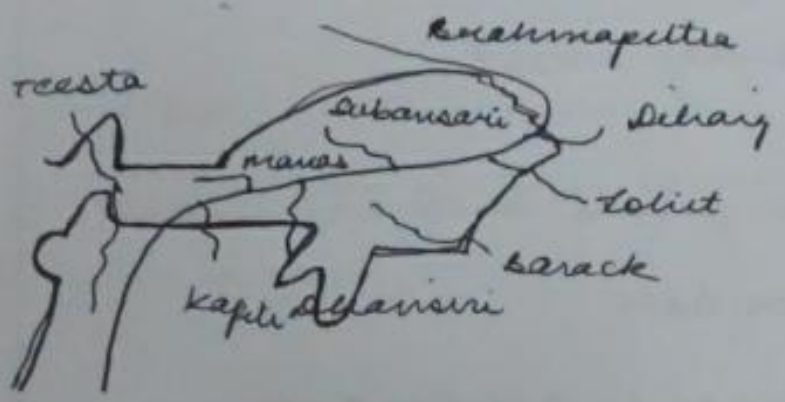
3. Discuss the challenges that lie in harnessing the potential of hydroelectricity in North-East India. (150 words) 10

पूर्वोत्तर भारत में जलविद्युत की संभावना का दोहन करने में आने वाली चुनौतियों की विवेचना कीजिए।

The North-East has rich hydro-electricity potential with rivers like Brahmaputra, Barack & Teesta.



Rivers in the North East

Challenges

(1.) No river sharing agreement with China
↳ Issues with dam construction on Tsangpo

(2.) River sharing complications as Bangladesh is lower riparian state

Don't write anything in this margin. (For examiner's use only)

③ Narmada valley basin and non-conducive plain topography which can lead to inundation

④ Highly seismic area poses dam safety threat

⑤ Challenges in land acquisition from tribals
↳ A lot of tribal land is communally owned

⑥ Environment concerns of dam ageing and tribal displacement
↳ North-East has 20% of total tribal population

margin

4. In light of various recent studies, discuss how climate change is affecting the jet streams. (150 words) 10

हाल के विभिन्न अध्ययनों के आलोक में, चर्चा कीजिए कि जलवायु परिवर्तन कैसे जेट धाराओं को प्रभावित कर रहा है।

Jet streams are narrow circumpolar bands of upper troposphere geostrophic winds

They flow from west to east in a meandering pattern forming rossby waves

Climate change impact

→ Increasing global temperature are altering the pressure system

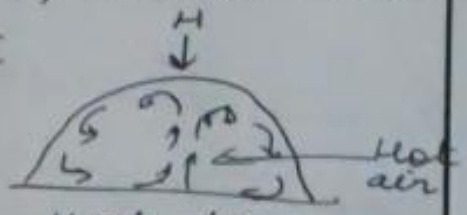
→ Increased instances of low temperature gradient among polar and sub-tropical regions

→ causes larger omega blocks

→ Omega blocks can move in downwards bringing frigid polar vortex as happened in Texas in Jan 2020

omega block

→ It can also form high pressure conditions even hot areas forming connective heat domes as happend in Lytton in British Columbia, Canada where temp. reached 50°C



Heat dome

IPCC's Assessment Report 6 predicts increased extreme weather changes due to impact on jet streams.

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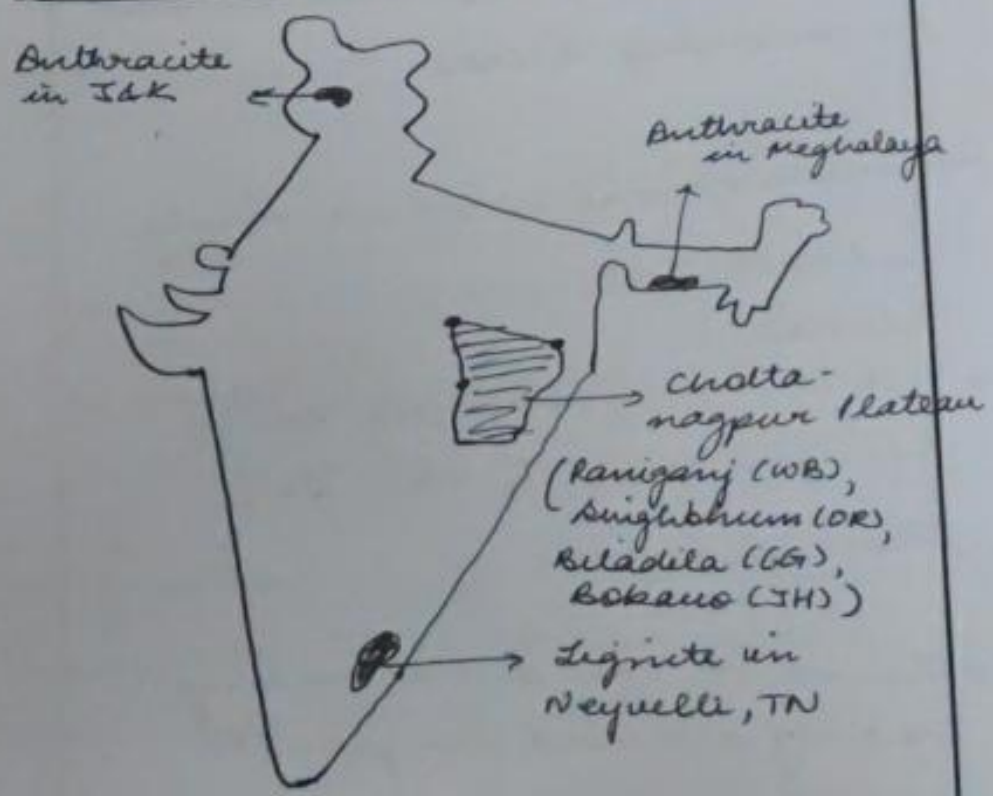
5. Highlighting the distribution of coal in India, discuss the issues associated with coal mining. (150 words) 10

भारत में कोयले के वितरण को रेखांकित करते हुए, कोयला खनन से जुड़े मुद्दों की विवेचना कीजिए।

In India coal is found in mostly Bituminous form with regional availability of lignite and anthracite. Rest is mostly peat (low-quality)

Also non-coking coal > coking coal



Coal in India

Issues with coal mining

→ Environmental concerns (As ash content of Indian coal is high)

→ Import dependence post coalgate scam and restrictions on awarding blocks

→ Uneconomical rat-hole mining in North-East Potential

→ Risk to energy security as coal dependence is 55% for power generation

→ Limits to Coal India's mining capacity and need for private investment.

Thus, coal presents important environmental and energy concerns requiring immediate attention.

6. Assess the efforts India has taken towards achieving the goals of the Strategic Plan for Biodiversity (2011-2020). (150 words) 10

जैव विविधता के लिए रणनीतिक योजना (2011-2020) के लक्ष्यों को प्राप्त करने की दिशा में भारत द्वारा किए गए प्रयासों का मूल्यांकन कीजिए।

India adopted strategic Plan for Biodiversity (2011-2020)

for fulfillment of AICHI Biodiversity Targets (19 targets in total)

Efforts

→ Ecosystem Restoration

* CAMPA → afforestation

* Nagar van yojana

* Green India Mission

→ Conservation of ecosystem through expanded Ramsar sites, Biodiversity Reserves, wildlife sanctuaries

→ PPVFRA act to safeguard breeder and farmer Rights

→ Addressing man-animal conflicts and better wildlife conservation outcomes
↳ Fastest tiger population growth (2500 in 2020 from 1400 in 2014)

→ Efforts at reversing land degradation and mangrove deterioration

→ Increase in forest & tree cover area to 24.5% in 2019

However, as per AICHI assessment report all countries have failed in meeting original AICHI targets and more needs to be done to conserve our biodiversity

7. Explain the concept of Ecosystem Restoration. What are the challenges and opportunities associated with this concept? (150 words) 10

पारिस्थितिक तंत्र पुनर्स्थापन की अवधारणा की व्याख्या कीजिए। इस अवधारणा से जुड़ी चुनौतियाँ और अवसर क्या हैं?

Ecosystem Restoration is a gamut of conservational and restorative activities aimed at reviving the ecological services and economic potential of degraded ecosystems.

Challenges :⇒

1. Time taking → Nature builds over eons while man destroys in centuries

2. Capital intensive technology
↳ Soil washing is cost prohibitive

3. Not-foolproof → Extremely tricky to regrow mangroves by transplantation

4. Multi faceted → Need to factor in ecological niche and services of all constituents of the community

(5) development v/s sustainability dilemma especially for the global south.

Opportunities

(1.) New breakthroughs → Miyawaki technique has shown tremendous promise in effective afforestation

(2.) Enhanced public awareness
↳ Fridays For Future

(3.) Paradigm change → from mitigation to climate adaptation.

(4.) COP-26 and promise for enhanced climate finance.

UN has declared 2020-30 as the decade of ecosystem restoration and we must capitalize on these opportunities to overcome these challenges.

8. Give an account of the challenges associated with rapidly increasing biomedical waste in India. Also, state the key features of the Bio-medical Waste Management (Amendment) Rules, 2018. (150 words) 10

भारत में तीव्रता से बढ़ रहे जैव-चिकित्सा अपशिष्ट से जुड़ी चुनौतियों का विवरण दीजिए। साथ ही, जैव-चिकित्सा अपशिष्ट प्रबंधन (संशोधन) नियम, 2018 की प्रमुख विशेषताओं का भी उल्लेख कीजिए।

Biomedical waste comprises of the discarded medical waste like syringe, mask, PPE kit, blood.

challenges

① Increasing volume due to COVID-19
↳ mask, shield, PPE kits

② Limited and environment polluting incineration technology

③ Increase threat of Anti-Microbial Resistance (AMR) due to contact with bio medical waste

④ Health hazard due to poor waste collection

⑤ Faulty implementation of Biowaste mgmt. Rules 2018

⑥ Further risk of outbreaks during pandemic era and risk of new zoonotic diseases due to poorly discarded waste

Biowaste Management Rules 2018

→ Process for collection and segregation

→ Guidelines on autoclaving syringes and medical equipment

→ Frontline healthworker PPE and mask disposal guidelines

→ Procedure for incineration of waste and its reporting

→ Guidelines for community workers collecting and handling biomedical waste.

The guidelines need to be manned with strong on ground infrastructure & implementation for ensuring safe disposal

9. Discuss the role played by local bodies in various phases of disaster management. (150 words) 10

आपदा प्रबंधन के विभिन्न चरणों में स्थानीय निकायों द्वारा निभाई जाने वाली भूमिका पर चर्चा कीजिए।

Local bodies are the third tier of our governance which is closest to the people.

eg → Panchayat, Municipalities, district development office

The Disaster Management Act, 2005 envisages an active role for local bodies in various phases of disaster management.

* Hazard mapping and vulnerability assessment → Local panchayats assist with identification and enumeration of at risk population

* Disaster-Preparedness → use of local population in creating structural assets like check dams, shelters and water-filling through MNREGA

* Early warning → Mock drills and use of local bodies in ensuring evacuation prior to cyclones

* Response → First line of defence post disaster during "golden hour"

* Rehabilitation → Rebuilding back better through community participation

* Resilience → Against future disaster.

Challenges → Lack of adequate funding & financial devolution.

Way Ahead → Covid-19 has shown played by local bodies especially in Kerala and Odisha. There is strong need to bolster their technical and financial wherewithal.

10. What do you understand by impact based forecasting in disaster management? How can such forecasting strengthen the disaster management preparedness? (150 words) 10

आपदा प्रबंधन में प्रभाव आधारित पूर्वानुमान से आप क्या समझते हैं? ऐसा पूर्वानुमान आपदा प्रबंधन की तैयारियों को कैसे मजबूत कर सकता है?

Impact based forecasting takes into account the economic cost of material & non-material damage as well as the potential impact of a disaster on vulnerable sections in an area.

It uses advanced mathematical models to account for impact in the form of (1) loss of houses, (2) destruction of public property, (3) casualty toll and (4) infra resources.

It employs vulnerability mapping (old, disabled, children) and uses past data to assign weights to probability of disaster risk and consequent impact.

Advantages :→

→ Helps understanding which critical infra are likely to be deliberated → alternate arrangements can be made

→ Gives ready insights for reducing casualties → rehabilitation/ resettlement of high risk population

→ Economic indices are more compelling in understanding loss to life & property
↳ Better governance response

→ Improves decision making

Thus, Impact based forecasting is an important tool in decision making for disaster preparedness.

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11. Plate tectonics, which is a unifying theory combining the continental drift and seafloor spreading theories, explains many features and processes that we find on the Earth. Discuss. (250 words) 15

प्लेट विवर्तनिकी, जो महाद्वीपीय प्रवाह और सागरीय तल विस्तार के सिद्धांतों के संयोजन का एक एकीकृत सिद्धांत है, कई अभिलक्षणों और प्रक्रियाओं को स्पष्ट करता है जिन्हें हम पृथ्वी पर पाते हैं। चर्चा कीजिए।

The Plate tectonics theory was a juxtaposition and further improvision on the continental drift and seafloor spreading theory.

As per sea floor spread theory by Hess & Dietz, mid-oceanic ridges and undersea volcanism were explained.

A. Wegner's Continental drift had hypothesized the current landforms as a consequence of divergence and splitting from an ancient super-continent called ~~Pangea~~ PANGEA.

Key precepts of Plate tectonics

* Landmass exists in the forms of oceanic and continental plates floating on heavier asthenosphere

* Asthenosphere and upper mantle being of ultimo origin has denser mass

* Ocean floor plates → basaltic origin (lighter than mantle, heavier than land)

* Continental plates → Andesitic to granite origin (lightest of all)

* All landforms consequence of plate interactions

Don't write anything this margin

Explains various features

→ Mid Oceanic Ridge (Ocean - Ocean divergence)

→ Faults & Left valley (Continental plates divergence)

→ Island Arcs like Japan & Philippines (Ocean - ~~Continent~~ Ocean Plate convergence)

→ Volcanic Mountains → Andes (Ocean - Continent plate convergence)

→ Fold Mountains → Himalayas (Continent - Continent convergence)

Explains various process

→ Volcanism (Basaltic & Andesitic)

→ Earthquakes (Energy release via plate movement)

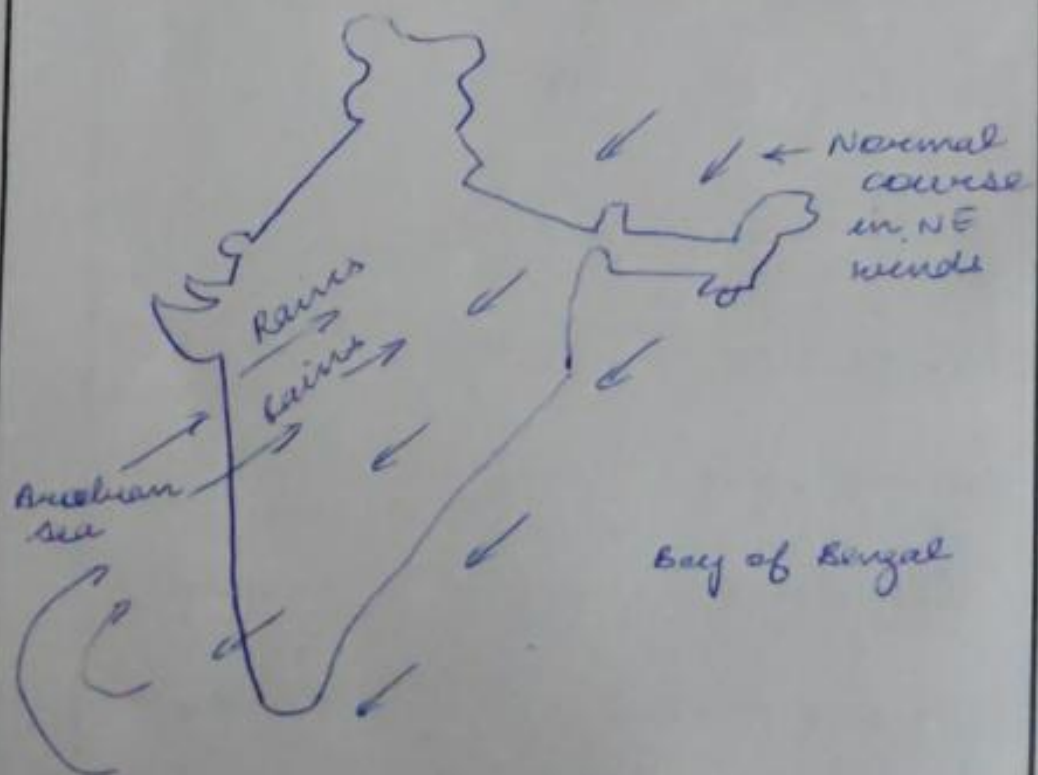
→ Tsunamis (underseas Earthquake)

Thus, plate tectonics is a simplifying theory.

12. The pattern of the Indian monsoon has been witnessing changes in recent decades. Examine in the light of recent studies linking this phenomenon to climate change. (250 words) 15

भारतीय मानसून के प्रतिरूप में हाल के दशकों में परिवर्तन देखा गया है। इस परिघटना का, जलवायु परिवर्तन से इसे सम्बद्ध करने वाले हालिया अध्ययनों के आलोक में परीक्षण कीजिए।

Indian monsoon is a unique phenomena characterised by seasonal reversal of winds which ushers much of rainfall in SouthEast Asia.



Seasonal reversal for SWMonsoon

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Of late there are wide vagaries in recent decades :=>

→ Delayed rains or early rains
→ Higher than usual precipitation
→ Decline and drought in many years
→ Changing pattern

Research has shown impact of climate change on the vagaries

* IPCC AR4 and AR5 have predicted increased instances of marine heatwaves due to rising temp (global warming)

* This has been linked to delayed low-pressure conditions on Tibetan Plateau impacting onset of rains

* Higher warming also leads to increased extreme events of floods (in Mumbai 2006) and drought due to change in El-Nino and La-Nina frequencies

* Indian Forest Report 2019 has acknowledged 50% increase in forest fire risk due to El Nino variation

* There are adverse impacts on Inter-Tropical Westerly Jet and Tropical Easterly Jet which form the backbone of monsoons

* ARG (IPCC) has said 1.5° increase is more unavoidable and South East Asia is most impacted from climate inconsistencies

As 55% of our net sown area is rainfed, climate change poses great risks for our food security.

anything this margin (इस भाग में कुछ ना लिखें)

13. Highlight the reasons behind high concentration of plantations in South India. Also, give an account of the significance and challenges that the plantation sector of South India is confronted with. (250 words) 15

दक्षिण भारत में बागानों के उच्च संकेन्द्रण के लिए उत्तरदायी कारणों पर प्रकाश डालिए। साथ ही, दक्षिण भारत के बागान क्षेत्रक के महत्व और उनके समक्ष व्याप्त चुनौतियों का भी विवरण दीजिए।

Plantations are large industrial agricultural ecosystems specialising in monoculture of a particular crop. eg → Rubber, Tea, Coffee.

Concentration in South India

* Suitable climate (Rain + Sun) → Tropical weather
  - ↳ Kerala's tropical climate is suitable for rubber
  - ↳ Baba Budan hills receive right amount of rain and altitude for coffee
  - ↳ sloping margins provide conducive environment for tea

* Availability of electricity required for processing through hydropower
  - ↳ Idukki, Mulaperiyar

* cheap/skilled labour (especially women) for plantations

* well-connected transport network (higher development in south) → conducive for exports

* Historically → started by British. so industrial inertia exists

* Availability of credit at competitive rate

SIGNIFICANCE

1. Boosts agri-exports earning much needed FDI (India → net exporter)

2. Higher income for rural households

3. Women empowerment → employed in huge number

4. Boost to services and downstream sectors → Cafe Coffee Day, Starbucks

Don't write anything this margin (इस भाग में कुछ ना लिखें)

CHALLENGES

1. Issues in land acquisition (as needs large landholding)

2. Forest clearance (especially in Nilgiris → Biodiversity hotspot) is a sensitive issue (Environment Min V/S Local Govt → Gadgil + Kasturirangan Committee) → ESA

3. Environmental challenges emanating from monoculture and deforestation

4. Default risk as capital intensive

Thus, there is need to harmonize the economic potential with environmental challenges to prevent our South from turning into Borneo (Indonesia)

14. What do you mean by industrial inertia? Bring out the factors that contribute to industrial inertia and also give a few examples from the Indian context. (250 words) 15

औद्योगिक जड़त्व से आप क्या समझते हैं? औद्योगिक जड़त्व में योगदान देने वाले कारकों को स्पष्ट कीजिए और साथ ही भारतीय संदर्भ से कुछ उदाहरण भी दीजिए।

Industrial inertia refers to the phenomena whereby a company/ industry continues to operate in the same geographical location despite that location losing strategic advantage due to lost of reasons

Factors contributing to industrial inertia

(1) Threat of substitute is not high enough to completely reduce advantage

(2) High cost of trans location

Don't write anything this margin (इस भाग में कुछ मत लिखें)

(3.) Ability to make profit (albeit reduced) with minor modifications and tech change

(4.) Cultural factors

↳ Lack of initiative

↳ Lack of alternate source of livelihood

↳ It has become part of material culture / rituals

(5.) Government support / subsidies due to political contingencies

(6.) Lack of education / skilling

Examples

→ Continuance of jute farming at large scale even when cheaper alternatives have revolutionized packaging material industry

↳ Dependent on JPM Act

→ Growing sugarcane in north which is water guzzler in a non-favourable climate vis-a-vis south.

↳ Historical reasons

↓

Indigo substituted by British

↳ FRP lure keeps inverted

→ Location of iron & steel industry closer to tribal area despite ports and new tech.

Don't write anything this margin (इस भाग में कुछ न लिखें)

15. What are rare earth elements? Highlighting their industrial applications, give an account of their distribution across the world. (250 words) 15

दुर्लभ मृदा तत्व क्या हैं? उनके औद्योगिक अनुप्रयोगों को रेखांकित करते हुए, विश्व भर में उनके वितरण का विवरण दीजिए।

Rare Earth Elements are vocance mineral resources with valuable industrial applications.

eg → Lithium, zirconium, molybedenum

Industrial Applications

→ Semi-conductor industry requires on lithium

→ Energy sector for lithium ion batteries + Automobiles (Electric car)

→ Defence for high grade steel via molybedenum

→ Aviation for zirconium for

high grade outer frame
→ Lithium reafers in solar industry
→ Missile technology → for zirconium + molybdenum

distribution in world

By definition rare earth materials are rather limited in sources.

→ Lithium is found in Argentina, Bolivia and Chile which account for >90% production

→ Zirconium and Molybdenum are found in Australia, Ural mountains in Russia, Ukraine and Kazakhstan + Congo.

This poses a challenge for any country as bulk of next-generation tech and renewable energy tech is dependent on them.

Way Ahead → India has formed KABIL (For Khanij i.e. minerals in Abance elements) to secure these.

The current supply chain crisis has shown the geopolitical contours and importance of rare earth elements.

16. Identify the causes behind the prevalence of various forms of human-wildlife conflicts in India. Also mention the steps taken by the government to prevent these, with emphasis on the "Landscape Approach to address Human-Elephant Conflicts". (250 words) 15

भारत में मानव-वन्यजीव संघर्षों के विभिन्न रूपों की व्यापकता के लिए उत्तरदायी कारणों की पहचान कीजिए। "मानव-हाथी संघर्षों को दूर करने के लिए भूदृश्य दृष्टिकोण" पर बल देते हुए, इन्हें रोकने के लिए सरकार द्वारा उठाए गए कदमों का भी उल्लेख कीजिए।

Human wild life conflicts are defined as attack on the material and non-material human well being by wild animals.

eg →

↳ Man-eater tigers

↳ Destruction of crops by herd of elephants

CAUSES

(1) Deforestation → Reducing area for animals

(2) Overpopulation → Putting stress on areas adjoining forests

Don't write anything this margin

(3) Lack of infra → To safeguard intrusion in human settlements

(4) Lack of skilled forest manpower

(5) Politicization of rights of forest dwellers

(6) Use of forest produce to graze cattle

(7) Lack of alternate infrastructure for animals

(8) Overurbanization as leading to fragmentation of contiguous wildlife areas
↳ Bandipur - Nagarhole - Madumalai

(9) Poor implementation of environment and wild-life protection laws

Indian government has taken a landscape-approach to address

this issue especially with elephants :⇒

① Project Rehab → Use of bee-boxes to guide elephants from not intruding in human settlement

② Elephant corridors to provide natural passageway addressing fragmentation issue

③ Eco-bridges and eco overpasses
↳ Traffic goes underneath without disturbing wildlife

④ Green eco-culverts → facilitates bypassing highways → animals go underneath ROB and overlying flyover

⑤ ESA → to act as a buffer
Thus new green innovations can go a long way in resolving man-animal conflict

...ess India's vulnerability to flash floods and suggest measures for better resilience to flash floods. In this context, also briefly highlight the significance of recently launched Flash Flood Guidance System (FFGS) operated by the Indian Meteorological Department (IMD). **(250 words) 15**

आकस्मिक बाढ़ के प्रति भारत की सुभेद्यता का आकलन कीजिए और इसके प्रति बेहतर लचीलेपन के उपायों का सुझाव दीजिए। इस संदर्भ में, हाल ही में आरंभ की गयी तथा भारत मौसम विज्ञान विभाग (IMD) द्वारा संचालित आकस्मिक बाढ़ मार्गदर्शन प्रणाली (FFGS) के महत्व पर भी प्रकाश डालिए।

margin (इस भाग में कुछ ना लिखें)

Flash floods refers to a sudden surge of water which inundates a habitation on a very short notice (in span of hours) compared to traditional floods (which may take days)

vulnerability to flash floods

→ Riparian population living downstream of major hydel projects especially in Uttrakhand ~~& Kerala~~
↳ Tehri Garhwal dam

→ glacial lake outbursts →
(i) High risk in Uttrakhand (Gangotri, Yamunotri) → Rishiganga episode
(ii) Himalayan Foothills

→ Ageing dams → heavy siltation reduces water carrying capacity
↳ Kerala floods in Munnar 2018
↳ >45% dams in India at risk

→ Urban spurts in heavy rain areas (Chennai, Mumbai)
↳ Poor drainage → rain water can't recede

→ Risk of flash floods from storm surge in coastal areas (more on East Coast)

Measures for resilience

→ Real time water level monitoring in high risk area

→ Better drainage infra in urban cities

→ Checking construction in low lying areas across coast

→ Disaster Mgmt drills and early warning systems in high risk areas

→ Improved geospatial tech and international collaboration for better and faster data

→ monitoring of all glacial lakes
↳ Preparation of real time glacial atlas through remote sensing

→ structural measures like floodplain zoning, river bank afforestation, slope reinforcement (reinforced earth walls and stone crates)

In this regard IMD's FFGS is designed to aid the real time monitoring by checking water levels, comparison with past data and use of mathematical models aimed at better prediction.

18. Marine litter is not just an environmental issue but poses a socio-economic challenge as well. Discuss. Also, enumerate the initiatives taken by the global community to reduce marine litter. (250 words) 15

समुद्री कचरा न सिर्फ एक पर्यावरणीय मुद्दा है, अपितु यह एक सामाजिक-आर्थिक चुनौती भी खड़ी करता है। चर्चा कीजिए। साथ ही, समुद्री कचरे को कम करने के लिए वैश्विक समुदाय द्वारा की गई पहलों को भी सूचीबद्ध कीजिए।

Marine litter is the discarded wastes and microplastics which are disposed off in seas and oceans.

Environmental issue

① Microplastics adversarial for fish

② Bioaccumulation and bio-magnification of harmful waste

③ Threatens human health → minimata disease (mercury litter)

④ Harmful for marine biodiversity
↳ Coral bleaching
↳ Nutrient enrichment & algal bloom

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(5) Plastic waste does not decompose easily → can cause acidification

(6) Oil spills cause dead zones

Socio Economic Issue

(1) Loss of tourism potential
↳ Australia's great barrier reef at risk of losing UNESCO status

(2) High cost expenditure in cleaning oil spills

(3) Deforestification of beaches and disruption of fishing communities

(4) Loss to seaweed and sea grass farmers

(5) Threatens food security especially for fish dependent societies like Japan & Norway.

International Initiatives

→ Bunker Convention → Against oil spill safeguards

→ Ballast Convention → Against release of ballast water & its litter

→ UNCLOS → local sovereignity in EEZs → ensures better governance

→ Intl. civil society (NGOs and non-government bodies like IMO, WWF and IUCN)

→ IORA summit recently had discussed anti dumping and marine litter issues

An all out international cooperation is crucial for tackling marine litter.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

19. India's response to the Covid-19 pandemic has brought to the fore several inadequacies and ambiguities in India's disaster management framework. Discuss. (250 words) 15

कोविड-19 महामारी के प्रति भारत की अनुक्रिया ने भारत के आपदा प्रबंधन ढांचे में व्याप्त अनेक कमियों और अस्पष्टताओं को उजागर किया है। चर्चा कीजिए।

The Covid-19 pandemic has tested the effectiveness of DM Act 2005 - key provisions of which were tested on ground for the first time.

Several inadequacies and ambiguities have been exposed in our disaster management paradigm.

→ Inconsistencies between Centre and State implementation of lock down and opening up

→ The fact that we had to shut completely our economy at low numbers as we grappled with getting resources ready for our administration

anything this margin (इस भाग में कुछ ना लिखें)

→ The lack of SDRF in sufficient numbers → states scrambled for front line volunteers

→ Ambiguity in PM Disaster Mgmt. Fund V/S PM CARES and its allocation

→ systematic inadequacies in oxygen supply during 2nd wave

→ Initial mix-up and confusion for opening up of vaccines for 18+ adults

→ Ambiguities in provisions pertaining to compensation.
↳ SC had to be aligned in for 50K amount

→ variation in calculation of death and manner across states.

(इस भाग में कुछ ना लिखें)

→ State V/S Centre tussle on federalism debate due to DCs exchange during lockdown

→ Holding of election rallies and Kumbh Mela before second wave while being extremely strict against Tablighi Jamat and 3 month lockdown in 1st wave.

However, it has also shown some silver linings

↳ Roll out of Aarogya Setu for contact tracing in record time

↳ High outreach → high vaccination rate & low resistancy

↳ Family well managed 1st wave despite initial hiccups.

Thus, the pandemic should serve as an opportunity to fine tune and learn from the administrative challenges and build on the successful implementations for a secure India.

20. In light of the increasing industrial disasters in India, examine the reasons for their occurrence. Discuss the steps that have been taken to deal with industrial disasters. (250 words) 15

भारत में बढ़ती औद्योगिक आपदाओं के आलोक में, उनके घटित होने के कारणों की जांच कीजिए। औद्योगिक आपदाओं से निपटने के लिए उठाए गए कदमों की विवेचना कीजिए।

There has been an increasing trend of industrial disasters recently.

eg → Styrene Gas Leak at LG Polymers in Andhra Pradesh

Reasons for occurrence

① Poor administrative oversight
↳ Key culprit company had been given a green clearance a week before Bhopal Gas Tragedy (Methyl Isocyanate)

② Poor safety infrastructure in factories to cut costs

③ Corruption and bribery to get environmental and

Don't write anything this margin (इस भाग में कुछ ना लिखें)

occupational safety clearances.

(4.) Slowdown in economy → puts pressure on local government to be more business friendly

(5.) Poor conviction and settlement record by judiciary. Bhopal gas victims still fighting for reviews in compensation.

Steps taken by Govt:

(1.) Environment Protection Act 1986 → Standards for monitoring effluents

(2) Public Liability Act → Recognizes no-fault liability → even if the accident is unintentional

(3) Factories Amendment Act has expanded the scope of compensation

to local residents in addition to workers.

(4) Hazardous Substances Manufacture, Import and Usage Rules → Guidelines on procurement and production

(5) Hazardous Waste Management Rules → checks waste and emissions oversights

(6) National Green Tribunal → Reinforced no-fault liability.

Thus, despite a strict regulatory regimen, more works required on the enforcement and to ensure compliance and check the increasing spurt of accidents.

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GENERAL STUDIES (TEST CODE : 1991)

Name of Candidate	Anand Mehrotra		
Medium Eng./Hindi	English	Registration Number	1018150
Center		Date	19/12/21

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

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Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Although the treaty on Nuclear Non-Proliferation (NPT) has acquired universal acceptance, it remains deeply flawed. Analyse in the context of India's position on the issues involved. (150 words) 10

यद्यपि परमाणु अप्रसार संधि (NPT) ने सार्वभौमिक स्वीकृति प्राप्त कर ली है, तथापि यह अभी भी अत्यधिक त्रुटिपूर्ण बनी हुई है। इसमें शामिल मुद्दों पर भारत के रुख के संदर्भ में विश्लेषण कीजिए।

The Nuclear Non-Proliferation Treaty (NPT) remains the principle instrument to ensure global peace from a nuclear armageddon.

It has universal acceptance

* upholds principle of limiting nuclear devices
  ↳ SIPRI → sufficient warheads present to wipe the entire planet several times over

* Ensures use of nuclear technology only for peaceful ends.
  ↳ Nuclear Energy

* Instrumental in maintaining peace and checking proliferation of nuclear bombs

However it remains deeply flawed from India's Point of view

* Inhibits R&D in defense capabilities
* Doesnot take into cognisance the nuclear threat India faces from its immediate neighbours Pak & China.
* Does not acknowledge India's committment to No First Use
* Hinders access to nuclear tech to aid India to transition to net neutral by 2070 as per COP-26 committments through nuclear energy.

Thus while it seeks to fasten status quo and peace, the NPT should remain cognisant to India's track record as well as its unique strategic challenges.

Don't write anything this margin (इस भाग में कुछ न लिखें)

2. Highlighting the existing gaps in the South Asian energy cooperation, bring out the steps taken by India to promote energy cooperation with its neighbours. (150 words) 10

दक्षिण एशियाई ऊर्जा सहयोग में विद्यमान अंतरालों पर प्रकाश डालते हुए, अपने पड़ोसियों के साथ ऊर्जा सहयोग को बढ़ावा देने के लिए भारत द्वारा उठाए गए कदमों को स्पष्ट कीजिए।

South Asian economies face the greatest threat to energy security in the sight of burgeoning population and negative externalities of fossilfuels.

Current gaps in energy co-op

1. Pakistan's denial of passage to Afghanistan → hinders TAPI, IIP pipelines.

2. Financial challenges due to high cap ex and India's reservations to funding by China

3. Issues with Nepal on Kalapani & Madhesis and Bangladesh on Teesta waters exploitation

4. Reconciling national interest with geopolitical realities

Don't write anything this margin (इस भाग में कुछ न लिखें)

steps by India

1. 'One World One Sun' and the International Solar Alliance to promote South-South cooperation.

2. Shahdut and Salma dam & hydroelectricity projects in Afghanistan

3. Pancheshwar dam hydel power plant in Nepal

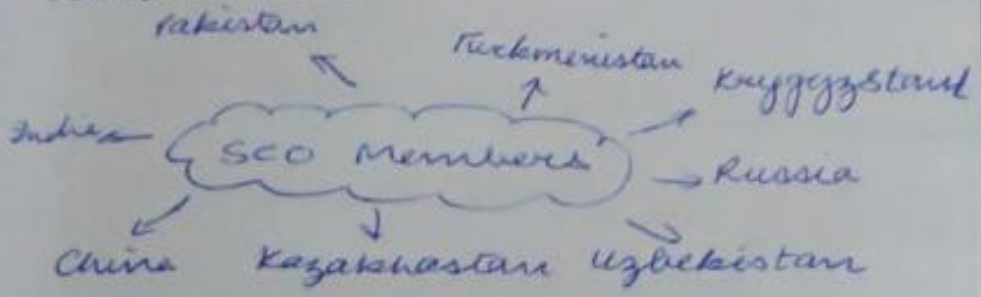
4. Energy co-operation and grid enhancement with Bhutan, Bangladesh, Nepal and India (BBIN)

Thus, India needs to put more impetus in energy cooperation for a vibrant South Asia

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. Critically analyse the significance of membership of the Shanghai Cooperation Organization (SCO) for India. (150 words) 10
भारत के लिए शंघाई सहयोग संगठन (SCO) की सदस्यता के महत्व का समालोचनात्मक विश्लेषण कीजिए।

India along with Pakistan joined the Shanghai Cooperation Organization (SCO) in 2018.



Significance for India

→ Potential to leverage SCO help in breaking stalemate with Pakistan for TAPI and IIP pipelines

→ Energy cooperation and mineral exploration as region is hotbed of strategic minerals

→ Access to Central Asian markets and Europe through a land route

Don't write anything this margin (इस भाग में कुछ ना लिखें)

→ Foster stronger people to people ties through enhanced trade and inter course

→ Boost Indian exports especially from agriculture

However there are certain challenges

→ Emerging China - Pak - Russia proximity

→ BRI initiative of China → debt traps

→ Encirclement of India → Maritime Silk Road

→ Cold relations with Pak → terrorism

→ US India proximity seems to be pushing Russia away.

As EAM said that the SCO is bound by values of Buddhism, it continues to be of great strategic importance

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. The wide adoption of 5G technology in India is contingent not only on robust IT infrastructure, but also on an effective cybersecurity strategy to tackle the associated risks and vulnerabilities. Analyse. (150 words) 10

भारत में 5G प्रौद्योगिकी का व्यापक रूप से अंगीकरण न केवल मजबूत IT अवसंरचना पर, बल्कि संबंधित जोखिमों और सुभेद्यताओं से निपटने के लिए एक प्रभावी साइबर सुरक्षा रणनीति पर भी निर्भर है। विश्लेषण कीजिए।

5G technology is expected to herald the next industrial revolution as it enables AI, IoT, AR-VR, 3D printing and machine learning.

↳ Adoption of 5G on efficiency gains alone will add 0.8% to GDP.

Needs contingent infrastructure

* Lack of R&D and existing infra
* Extremely leveraged existing players like Jio and Vodafone
* Spectrum changes extremely cost prohibitive
* Limited fiscal space of govt in light of covid pandemic

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Has its own challenges

* Lead by Huawei and ZTE from China → fraught with cybersecurity risks

* Can expose military and critical infrastructure at risk if implemented through non-friendly technology

* Chinese ability to control private players raises to the land function creates suspicion. eg → Jack Ma ordeal

* Increased digitization means increased threat. Despite digital divide India is home to highest no. of smartphones

Thus, India needs to build up a forward looking cyber infrastructure & security policy along with international co-operation (like D10 alliance)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. Discuss the role played by Assam Rifles in internal security of India. Also, comment on the issue of dual control structure of the force.

(150 words) 10

भारत की आंतरिक सुरक्षा में असम राइफल्स द्वारा निभाई गई भूमिका की विवेचना कीजिए। साथ ही, इस बल के दोहरे नियंत्रण की संरचना के मुद्दे पर टिप्पणी कीजिए।

Assam Rifles were a part of the Central Paramilitary Forces (along with the Indian Coast Guard) to provide internal security.

They play a crucial role in Assam given its unique intl security challenges

→ Inter-tribal conflict and violence
↳ Bodos v/s others
↳ Assam v/s Mizoram border issue (Lushai Hills)
↳ Greater Nagalim areas

→ Terrorism threat
↳ ULFA-I
↳ PLK threat

→ Anti-migrant rhetoric against Bangladesh migrants/refugees
↳ student movements

Don't write anything this margin (इस भाग में कुछ नहीं लिखें)

In lure of these challenges the Assam rifles provides dual role :⇒

(1) Net security provider through coordination with Army against border security and terrorist threat from ULFA.

(2) Internal security to mitigate inter-tribal violence and clashes against refugees.

It is both internally and externally oriented to deal with issues emanating from both within & outside country.

Don't write anything this margin (इस भाग में कुछ न लिखें)

6. Enumerating the existing measures to counter bio-terrorism in India, highlight the need for a bio-terrorism law. (150 words) 10

भारत में जैव-आतंकवाद का मुकाबला करने के लिए मौजूदा उपायों को सूचीबद्ध करते हुए, एक जैव-आतंकवाद कानून की आवश्यकता को रेखांकित कीजिए।

Bio-terrorism refers to the act of killing and injuring populace through use of biological weapons

Need for a bio-terrorism law

1. Bio-terrorism is not defined within constitution/legal acts like UAPA

2. Need to foresee and mitigate crisis like Disaster Management Act 2005 did for Covid pandemic

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Ability to arrest, try and thwart such events

(4) Search & seizure grounds for law-enforcement

(5) Bringing in best practices in intelligence from international co-operation.

Current Mechanisms

(1) India is signatory to Convention against bio-chemical weapons

(2) UAPA, NIA, NSG Act → which apply to terrorism

(3) Provisions of IPC 1861 & CrPC in causing death, grievous & public disorder.

Thus, bio-terrorism is a new age threat that needs to be met with utmost urgency through correct legislative action.

7. Despite the progress made in ensuring better representation of women in the Indian armed forces, much more still needs to be done. Discuss.

(150 words) 10

भारतीय सशस्त्र बलों में महिलाओं का बेहतर प्रतिनिधित्व सुनिश्चित करने में हुई प्रगति के बावजूद, अभी भी बहुत कुछ किए जाने की आवश्यकता है। चर्चा कीजिए।

The Constitution envisages equal rights and opportunities for women under Art 14, 15(1), 15(3), 16(1).

However the representation of women in Armed Forces does not match this aspiration:⇒

* Resistance by Armed forces against permanent commission for women
  ↳ one of the court orders stated lack of order taking by male superiors as a barrier

* Manifest patriarchy in society especially North-west which contributes maximum personnel to armed cadres

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* Lack of appeal of armed forces due to indoctrination from birth that army is not for women

* Only recently permanent commission was open for women. In its absence there was structural disincentives in women's participation.

* Lack of accompanying infrastructure in defence services for women

* Lack of role models

* Resistance to give combat roles to women → higher representation in engineering & medical posts.

India should take a cue from Israel in this regard and much needs to be done to bolster women in army.

8. Discuss the different types of clean coal technologies. Identify the challenges associated with mainstreaming clean coal technologies.
(150 words) 10

विभिन्न प्रकार की स्वच्छ कोयला प्रौद्योगिकियों की विवेचना कीजिए। स्वच्छ कोयला प्रौद्योगिकियों को मुख्यधारा में लाने से जुड़ी चुनौतियों की पहचान कीजिए।

clean coal technologies minimize (CCT) the harmful effluents from coal burning (like CO, SO_2, heavy metals) and make it suitable for environment.

1. Conversion to syngas → anaerobic combustion yields syngas ($CO+H_2O$) which is cleaner fuel

2. Washing of coal → minimizes effluents considerably

3. Electrostatic precipitators → more efficient in entrapping particulate emissions (PM 2.5, 10)

4. Baghouse filters & gelation

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challenges

① Need heavy R&D investment

② Coal dependence is 55% for power generation → need large amount of money to replace

③ Locally produced coal is of lower quality is higher pollution due to high ash content → Non-coking coal and bituminous/lignite coal instead of anthracite

④ Lack of skilled labour force

⑤ Lack of international fin especially development agencies that raise eyebrows on coal.

CCT is required if India is to meet ~~zero~~ net zero by 2070.

9. Low Earth Orbit is becoming increasingly crowded as countries race to launch satellites into space. Highlighting the associated issues, discuss international efforts taken in this regard. (150 words) 20

देशों द्वारा अंतरिक्ष में उपग्रहों को प्रक्षेपित करने की बढ़ती होड़ में निम्न भू-कक्षा में इनका संकेंद्रण बढ़ता ही जा रहा है। इनसे संबंधित मुद्दों को रेखांकित करते हुए, इस संबंध में किए गए अंतर्राष्ट्रीय प्रयासों पर चर्चा कीजिए।

The Low Earth Orbit supports satellites around Karman line in atmosphere and has in recent days become very crowded

ISSUES

* Space debris → threat Proliferation of satellites due to
  (a) Digitisation
  (b) Increase in tele-com
  (c) Rise of space tourism
  (d) Increase in defence tech
  (e) Increase need for remote sensing due to climate change, forest fires

* Risk to astronauts in space
* depreciating space infra like ISS

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(*) Space tourism is not affected in International law → habitual issue

International efforts :⇒

* Outer space treaty

* United Nations Convention on using outer space as global common

* China has recently developed NEO-1 → a robotic tool to remove space debris

* UN secretary General has expressed that co-operation needs to be sought to govern Anti-Satellite Missiles (Russia recently test fired one against own satellite)

Thus, while space tourism & digitization heralds numerous opportunities, they need to be managed with the multiple governance issues therein.

margin
(इस भाग में कुछ ना लिखें)

10. Inspite of multiple benefits and growing acceptance of traditional medicine, it faces several hurdles in adoption at a large scale. Discuss. (150 words) 10

पारंपरिक चिकित्सा के विविध लाभों और बढ़ती हुई स्वीकृति के बावजूद, यह बड़े पैमाने पर अपने अंगीकरण में अनेक बाधाओं का सामना कर रही है। चर्चा कीजिए।

India has been a frontrunner in traditional medicine since time of Sushruta, Charak & Patanjali and gave the world AYUSH.

(Ayurveda, Yoga, Unani, Siddha, Homeopathy)

Growing Acceptance

* Mainstreaming of wellness due to double disease incidence i.e. diabetes, cancer, lifestyle disorder

* Immunity supplements against covid → Coronil by Patanjali, Ginger, Moringa powder

* Knowledge about harms of excessive antibiotics and AMR.

* Preference for natural products.

Homeopathy faces hurdles in acceptance :→

① Protest by ICMR unitrally against induction of Shalya as surgery

② Allopathic systems treat it as non-scientific and placebo

③ Lack of international consensus on Ayurvedic surgeries

④ Pharma lobby v/s AYUSH

⑤ Dearth of R&D into scientific utility of Indian traditional medicine

While acceptance challenges remain, AYUSH has great utilities especially in bridging the healthcare gap in rural areas and needs more R&D to boost acceptance.

11. While India-US relations have acquired greater depth in the last two decades, the policies of Washington even in this era continue to pose challenges to New Delhi's strategic interests. Discuss with adequate examples. (250 words) 15

जहाँ विगत दो दशकों में भारत-संयुक्त राज्य अमेरिका संबंधों में और अधिक गहराई आई है, वहीं इस दौर में भी वाशिंगटन की नीतियाँ नई दिल्ली के सामरिक हितों के समक्ष चुनौतियाँ प्रस्तुत करती रही हैं। पर्याप्त उदाहरणों के साथ चर्चा कीजिए।

The partnership between India and US represents the principles of democracy, between the largest and oldest democracies in the world.

greater depth in recent times :=>

1. Increased strategic coordination through Quadrilateral Security Dialogue

2. Thriving Indian diaspora → most affluent amongst migrants in US
→ Kamala Harris, Sundar Pichai, Satya Nadella, Panag Agrawal

3. Increasing defence cooperation
→ Procurement of NSSAMS from US

(4) 4 strategic agreements signed

→ BECA → Geospatial data sharing

→ LEMOA → logistics help to troops

→ GSMIO → Intelligence sharing

(5) Booming trade and intercourse

→ US is India's largest trade partner

→ Co-op in solar energy

(6) Strategic alliance and common interest against an increasingly hegemon China.

But there are continued challenges

(1) Inconsistency of US policy

→ Kissinger era fear of India

→ Launch of AUKUS put QUAD in question

(2) US fear on India - Russia ties

→ 60% Indian defence support from Russia

anything this margin

(3) Non-alignment on climate finance and greater role of developed world in climate mitigation

(4) Withdrawal of GSP and push against Indian subsidies in WTO

Way Ahead

Despite the differences, the rising left of China and its increasing assertiveness in Indo-Pacific makes India a natural ally for US.

Scope for enhanced co-op in
- → Energy (WTI oil) Nuclear
- → Trade
- → Tech transfer
- → Defense

Thus the challenges need to be overcome to enhance co-op

12. Even as old issues remain unresolved, WTO is faced with the challenge of striking a balance between the interest of the developed and developing world. Argue with reference to the issues brought to the fore by the worldwide impact of the COVID-19 pandemic. (250 words) 15

पुराने मुद्दों के न सुलझने के बावजूद WTO को विकसित और विकासशील विश्व के हितों के बीच संतुलन साधने की चुनौती का सामना करना पड़ रहा है। कोविड-19 महामारी के वैश्विक प्रभाव के कारण सामने आए मुद्दों के संदर्भ में तर्क प्रस्तुत कीजिए।

The WTO has heralded unbridled trade propensity since its inception.

Unresolved historic issues

* Agreement on Agriculture
→ Doha round of talks are yet to be concluded
→ Difference on subsidies between developed & developing world as deminimum level ensures higher quantum of subsidies in developed but threatens food security of developing world

* US's changing stance and accusations of being snubbed → does not enjoy voting monopoly like IMF

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* Deferred dispute settlement since 2018 due to US policies
* Continued battle on IPR rights and use of TRIPS flexibilities especially for life saving pharma-centricals
* Issues pertaining to appropriation of GIs → Pakistan & Egypt claims on Basmati Rice

Novel challenges due to COVID-19

* Issue on IPR rights and their waiver for vaccine production. Developed world headed for boosters even as developing world yet to receive first dose
* Pharma lobbying against compulsary licensing of remedial treatments like Pfizer & Merck drugs
* widespread trade disruption due to global supply chain crisis and unanticipated lockdowns

* decline in overall world trade for the 1st time since its inception.

Way Ahead

→ Need to push for making the dispute settlement process functional again

→ Tilters in dispute settlement to account for pandemic related delays & hurdles

→ Bring in flexibilities to check vaccine nationalism and global equity in distribution

→ Further period for Bali peace accord to extend support to LDCs and developing world.

Thus, WTO should focus on fastracking resolutions for both old and new challenges to give a fillip to world trade

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13. The economic rise of Bangladesh is an opportunity for India and hope for South Asia. Examine. (250 words) 15

बांग्लादेश का आर्थिक उदय भारत के लिए एक अवसर और दक्षिण एशिया के लिए आशा है। स्पष्ट कीजिए।

The economic success of Bangladesh is a testament to 50 yrs of planned welfarism since 1971

Key reasons for growth

* Competitive labour force has promoted industrialization
* Playing on few relative cost advantages than widening net as per ES 2021
* Competitive garment industry - global manufacturer for Zara
* Financial inclusion and credit through Grameen Bank
* Engendered development with better female labour force participation than India

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Opportunity for India

* Potential to increase and support jute industry as jute mills in India

* India - Bangladesh joint infra development can further trade

→ Maitri Express (Haldibari - Chilahati)
→ PIWTT → for inland waterways

* Potential to boost economy in North-East
→ Inclusion of exports through Chittagong port
→ Agartala - Dhaka bus route will foster connectivity

Opportunity for South Asia

* Ability to increase connectivity and enhance co-operation across south east Asia

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→ BCIM connection

* People to people movement and exchange
  → BBIN Motor Vehicle Agreement (MVA)

* Prosperous and fundamentalism free Bangladesh important for security of Bay of Bengal region

* Enhanced economic ties through multilateral instruments like BIMSTEC, SAARC and Mekong Ganga

Thus, an economically prosperous Bangladesh bodes well for India and South Asia.

14. Transboundary water resources require renewed focus in India's neigbourhood policy. Elaborate and provide adequate reasons. (250 words) 15

सीमा-पार जल संसाधन पड़ोसी देशों के प्रति भारत की नीति में नए सिरे से ध्यान केंद्रित करने की मांग कर रहे हैं। संक्षिप्त वर्णन कीजिए और पर्याप्त कारण प्रदान कीजिए।

'Water water everywhere but not a drop to drink' – Samuel T. Coleridge

India shares transboundary water resources with Pakistan, China, Nepal, Bhutan and Bangladesh – each having their own challenges.

1. Pakistan
↳ governed by Indus Water Treaty 1960
↳ Issue over Kishanganga dam of the water on Jhelum
↳ Scope to increase Indian utilization of Ravi waters
↳ current issues on non-cordial relations between the two hampering economic co-op

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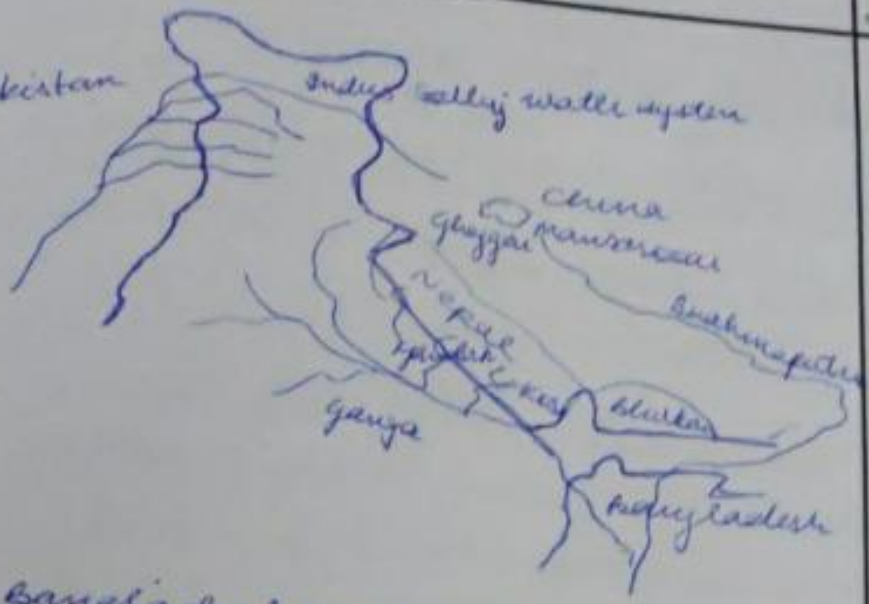

2. Bangladesh → Testing issues on Teesta and increased China investment on water projects

3. China → No water sharing agreement and threat to block upstream areas through dams on Brahmaputra

4. Nepal → Recent disputes on Limpidhura, Lipulekh & Kalapani and issue of Kosi water flood management

5. Bhutan → Relatively lesser issues but scope for co-operation for better exploitation

Need for renewed focus

→ >50% of agriculture is rainfed and need to exploit inter-linking of rivers

→ Increasing water-risk → India contributes to 4% of water resources but 25% of ground water exploitation

→ water security in the sight of Galwan clash with China

→ Need for co-operation on flood management especially in sight of climate change.

Thus, to secure destiny of our future, transboundary resources require renewed diplomatic co-operation.

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15. India's attempts at strengthening its intelligence infrastructure and capabilities have historically been reactive and incremental, rather than holistic and sustainable. Discuss. Also, provide a concrete framework in transforming the country's intelligence capabilities. (250 words) 15

अपनी आसूचना अवसंरचना और क्षमताओं को मजबूत करने के भारत के प्रयास समग्र और स्थायी होने के बजाय ऐतिहासिक रूप से प्रतिक्रियाशील और वृद्धिशील रहे हैं। चर्चा कीजिए। साथ ही, देश की आसूचना क्षमताओं के रूपांतरण हेतु एक ठोस ढांचा भी प्रदान कीजिए।

India has come a long way since independence in developing its intelligence capabilities.

Historically reactive framework

* NIA and MSAC developed only in the aftermath of 26/11 Mumbai terror attacks

* POTA as reaction to IC 814 hijacking crisis & humiliation

* Multiplicity of jurisdictions and agencies
  ↳ IB, MSAC, SSAC perform similar functions
  ↳ overlap in DRI, NCB, FIU-IND
  ↳ law & order → State V/S CBI & RAW @ Centre

* Delay in implementation
  ↳ NATGRID conceived in 2013 but not yet completely operational

* Laggard in innovation
  ↳ Cyber threat perception remains high
  ↳ only incremental changes through CERT-In and Fin-CERT
  ↳ critical infra vulnerable despite CISO & Cyber Security Policy 2013
  ↳ Mumbai power plant

* Economic Fugitive Offenders Act 2018 an after-thought

India needs to mature to a holistic and sustainable framework

* Enhanced international co-op like the 5 Eyes Alliance

* Need to push R&D in cyber security, dark web, IoT, AI

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* Use of drone policy from border security

* Incentivise to premier institutions to take a lead and join intelligence in creating CIA like behemoth

* Spur multi-disciplinary research and education in defence and intelligence

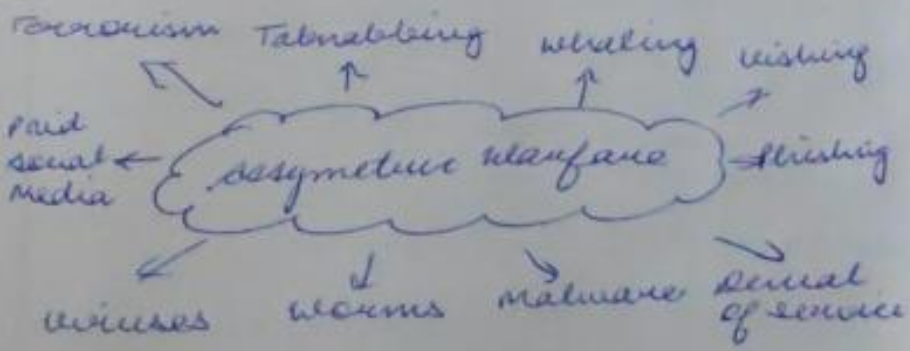
Thus a more holistic framework on intelligence has to be balanced on the trinity of innovation, international cooperation and research and pedagogy

Don't write anything this margin (इस भाग में कुछ ना लिखें)

16. The challenge of asymmetric warfare for India due to rapid progression in use of technological innovations and low costs needs ever greater focus. Explain with domestic and global examples of recent years. (250 words) 15

तकनीकी नवाचारों के उपयोग में तीव्र प्रगति और कम लागतों के कारण भारत के लिए असममित युद्ध की चुनौती पर पहले से अधिक ध्यान देने की आवश्यकता है। हाल के वर्षों के घरेलू और वैश्विक उदाहरणों के साथ स्पष्ट कीजिए।

Asymmetric warfare is one where there is no direct clash between two sides. Rather there is crippling of an opponent even without fighting through terrorism, cyber attacks, etc.



Domestic Incidents

① Denial of service attack at Mumbai power plant by Chinese hackers

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(2) Terrorism sponsored by ISI and non-state actors in J&K

(3) Reports of drug smuggling through drones in Punjab

(4) Attack and Ransomware on Paytm and payment apps also demanding crypto payment

(5) Increasing cybercrime → NE is emerging as ground for hackers for easy border escape

Global Incidents

(1) Blue whale challenge drove children to suicide

(2) Cambridge Analytica and Snowden Revelations threatened US policy and security details

(3) Stuxnet attack on Iran's nuclear power plant

~~(4) Armenian~~

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Way Ahead :⇒

Sun Tzu had remarked that the best warfare is one that you don't have to fight. Higher tech and low costs can threaten India as ⇒

1. Infra rendered non-usable
2. Even increasing digital dependence
3. Sovereignty of security equipment, nuclear details, satellites endangered
4. Economy crippled through stock exchange manipulation.
5. Secession threat of terrorism

Thus, there is need for a more forward looking threat assement coupled with timely response.

Don't write anything this margin (इस भाग में कुछ न लिखें)

17. In light of the prominent instances of drone attacks by both state and non state actors, assess the challenges and capabilities of India in dealing with such security threats. (250 words) 15

राज्य और गैर-राज्य दोनों अभिकर्ताओं द्वारा ड्रोन हमलों के प्रमुख दृष्टांतों के परिप्रेक्ष्य में, ऐसे सुरक्षा खतरों से निपटने में भारत की चुनौतियों और क्षमताओं का आकलन कीजिए।

The drones have come to redefine the nature of warfare in recent times.

Use by State Actors

→ Saves human casualties
→ Very accurate targetting
→ Ability to escape radars

The victory of Azerbaijan over Armenia was primed on Turkey procured drones

Use by Non-State Actors

→ Promote terror and smuggling
→ Can be used to drop bombs
↳ Attack on ammunition & army officer in Jammu

Don't write anything this margin (this area is reserved for binding)

→ Risk of transporting drugs & narcotics

Challenges for India

* In-house production remains low and have to bank on imports

* Limited fiscal space especially in sight of covid-19 pandemic

* Existing terror and insurgent threat in J&K, LWE and insurgency in NE

* Tech savvy China and Pakistan's proximity to Turkey to procure drones

Indian Capabilities

* The New Drone Rules 2021 are an enhancement over UAS Rules 2021 and will promote private sector investment in drone sector in sight of low fiscal space for centre

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* Improving ties with Israel and US → scope to import drones

* DRDO has been the bellwether guardian of tech and innovation

* S-400 missiles and multi-layer anti missile anti drone protective shield in Delhi
↳ learning curve can be extended to drones as well → Iron-Drone

Thus despite challenges, there exist diplomatic channels as well as our own history of indigenization of technology which can guide us in weathering this storm

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18. Bring out the differences between Surface Web, Deep Web and Dark Web. Also, mention the concerns associated with use of Dark Web and steps taken by India in this context. **(250 words) 15**

सरफेस वेब, डीप वेब और डार्क वेब के मध्य अंतर स्पष्ट कीजिए। साथ ही, डार्क वेब के उपयोग से जुड़ी चिंताओं और इस संदर्भ में भारत द्वारा उठाए गए कदमों का भी उल्लेख कीजिए।

Internet has revolutionized modern day economies and has become all pervasive.

Surface web refers to the easily accessible part of internet which can be reached and used by ordinary individuals through apps/ sites like Google, Yahoo, Microsoft world, Youtube.

It is analogous to an iceberg which remains only 10% above surface.

Much of internet is not accessible through normal IP protocols and ~~roots~~ remains hidden in the form of Deep Web. It requires

differentiated infrastructure and coding for access. Dark Web is that part of internet which is in the deep web but operates obliviously and anti thetically to scrutiny of government & law enforcement.

Concerns with Dark web :-

1. Conspiracy of terrorism and illegal activities like smuggling and terror financing
2. Threat to cyber security and critical infrastructure
3. Lack of government scrutiny
4. Ineffectiveness of international cooperation in tracking the accused
5. Element of anonymity to perpetrator

Steps taken by India

1. National Cyber Security Policy 2013
2. National Centre for Co-ordination against Cyber Crime
3. I4C Initiative to counter dark web
4. International co-operation on financial intelligence through FATF, FIU-IND
5. CISO provision in critical govt infrastructure
6. Holistic intelligence framework against terrorism comprising of NATGRID, IB, NIA, Multi PAC, SPAC

A vigilant and proactive legislative & regulatory framework against dark web is the need of the hour.

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19. What are Nano-based Agri-input and food products? Discuss the opportunities and concerns related to use of such products in India. (250 words) 15

नैनो-आधारित कृषि आगत और खाद्य उत्पाद क्या है? भारत में ऐसे उत्पादों के उपयोग से संबंधित अवसरों और चिंताओं की विवेचना कीजिए।

Nano technology has redefined the contours of innovation and research. Nano-based agri input and food products use nanotechnology (i.e. particles to the size of 10 nm) as inputs in agriculture.

Benefits of nano-based agri inputs and food products

① Minimize wastage and effective application of inputs due to ability to delivery targetedly with high precision

② Environmentally more sustainable than use of pesticides
↳ 65% of agri land at risk of pesticide pollution

③ Higher productivity per unit land compared to traditional methods

④ Reduce input cost of agri as only the requisite dosage is provided

⑤ Beneficial for farmer health.
↳ Cancer belt in Punjab due to overuse of inputs

⑥ Avoids risk of land pollution and eutrophication of water bodies

⑦ Can be used to ensure food security

⑧ Nutrition augmentation via bio-fortification

However it is not without its share of concerns :⇒

→ Environment is multi-variate and overall impact on ecosystem requires time for evaluation as happened with Bt-Cotton & pink bollworm

Don't write anything this margin (इस भाग में कुछ ना लिखें)

→ Risk on body and health not fully studied

→ Pest resistance as a construct needs to evaluated

→ Lack of R&D and high cost of diffusion of new technology especially in absence of enabling infra structure or skilled workforce.

→ Impact on food chain needs to be analyzed to rule out risk of ~~bio fortific~~ bio magnification & bio-accumulation

Therefore, despite its several promises, there are environmental and healthcare concerns that need to be allayed for successful and sustainable adoption.

20. As with any major advancement in technology, robotics brings with it a spectrum of opportunities as well as challenges. Discuss in the context of India. (250 words) 15

जैसा कि प्रौद्योगिकी के क्षेत्र में किसी भी बड़ी प्रगति के साथ होता है, रोबोटिक्स भी अपने साथ अवसरों के अतिरिक्त व्यापक चुनौतियां भी प्रस्तुत करता है। भारत के संदर्भ में चर्चा कीजिए।

Robotics have ushered in umpteen possibilities using which the world is embarking on Industrial Revolution 4.0

Opportunities for India

* Agriculture → Precision agriculture, irrigation and water use efficiency

* Mineral prospecting (oil) and exploitation to avoid rat hole mining

* cleaning oil spills through nano-bots

* Advancing healthcare services especially during covid times
  ↳ Healthcare workers

margin
(इस भाग में कुछ ना लिखें)

* Industry 4.0 → New age supply chains automated through robots especially in semiconductors

* Cleaning nuclear waste and handling radioactive leakage → disaster management

* Automation of border security to check terrorism and infiltration

However Challenges remain

* Lack of R&D compared to West
  → Low govt. spending on R&D → <2%.
  → Low private sector participation

* Risk to job-security and job loss → demographic dividend can become demographic disaster

* Lack of infrastructure in terms of forward and backward linkages for industry

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* Lack of enabling ecosystem & demand

WAY AHEAD

→ Create incentives for private participation → PLI scheme

→ supportive govt policy for growth
↳ Atmanirbhar

→ Need to envisage current lacuna in law to address potential future roadblocks → ~~cf~~ how to hold robots liable for damages?

Thus while robotics presents tremendous ~~chalk~~ opportunities, they need to be harmonized in the light of challenges to be an agent of good.